

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jeff EDER

Serial No.: 09/940,450

Filed: August 29, 2001

For: An automated method of and system for identifying measuring and enhancing categories of value for a value chain

Group Art Unit: 3692

Examiner: J. Liversedge

Brief on Appeal

Sir or Madam:

The Appellant respectfully appeals the rejection of claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 in the March 6, 2009 Office Action for the above referenced application. The Table of Contents is on page 2 of this paper.

The appeal brief is being sent in response to the notice of non compliant appeal brief mailed on November 2, 2009.

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1. Real party in interest

Asset Reliance, Inc. (dba Asset Trust, Inc.) is the Appellant and the owner of 100% interest in the above referenced patent application.

2. Related appeals

An Appeal for U.S. Patent Application 09/764,068 filed on January 19, 2001 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/166,758 filed on June 12, 2002 may be affected by or have a bearing on this appeal. The subject matter of the first appeal for U.S. Patent Application 10/282,113 is similar to the subject matter of some of the claims in this appeal. However, it does not appear to pass the "reasonable examiner" test so it was not included.

3. Status of Claims

Claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are rejected and are the subject of this appeal. Claims 1 through 33, 53 through 61, 65, 66, 67, 71 through 89, and 92 through 133 are cancelled.

4. Status of Amendments

There are no amendments pending.

5. Summary of Claimed Subject Matter

One embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain according to the present invention is best depicted in Figures 1 through 10 of the specification for the instant application. Figure 1 gives an overview of the major processing steps which include integrating data from a plurality of database management systems for use in analysis, analyzing the data in the integrated database as required to: transform the data into a model of financial performance by element and category of value, identify and analyze value improvements and produce reports.

Independent claim 34 – One embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent

claim 34 where an article of manufacture instructs a computer system to implement a process that obtains data from a plurality of systems and use a computer to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database and output said database - is described in FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 35 – The limitations associated with dependent claim 35 are found in a number of places including line 1, page 2 through line 18, page 7, Table 15, pages 27 and 28 and line 3, page 29 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 36 – The limitations associated with dependent claim 36 are described in a number of places including lines 2 through 5, page 2, Table 15, pages 27 and 28, lines 9 through 23, page 29 and Table 16 on page 29 of the specification.

Claim 37 – The limitations associated with dependent claim 37 are described in a number of places including FIG. 6A, reference numbers 307, 308, 309 and 310 and line 8, page 49 through line 8, page 51 of the specification.

Claim 38 – The limitations associated with dependent claim 38 are described in a number of places including Table 1, page 8, Table 15, pages 27 and 28 and line 3, page 29 through line 6, page 30 of the specification.

Claim 39 – The limitations associated with dependent claim 39 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification. The development

and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 40 – The limitations associated with dependent claim 40 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 41 – The limitations associated with dependent claim 41 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 1, page 21 through line 3, page 37 of the specification.

Claim 42 – The limitations associated with dependent claim 42 are described in a number of places including FIG. 1 reference numbers 25 and 40; FIG 5D, reference numbers 266, 267, 268, 269, 270, 271, and line 4, page 37 through line 3, page 40 of the specification.

Claim 43 – The limitations associated with dependent claim 43 are described in a number of places including the portion of the specification that supports claim 43, FIG. 1, reference number 50 and line 16, page 27 through line 3, page 40 of the specification.

Independent claim 44 – A second embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 44 where a process uses a computer system to obtain data from a plurality of systems and then transform said data into an integrated database using xml and a common schema. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database - is described in FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference

numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 45 – The limitations associated with dependent claim 45 are found in a number of places including line 1, page 2 through line 18, page 7, Table 15, pages 27 and 28 and line 3, page 29 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 46 – The limitations associated with dependent claim 46 are described in a number of places including lines 2 through 5, page 2, Table 15, pages 27 and 28, lines 9 through 23, page 29 and Table 16 on page 29 of the specification.

Claim 47 – The limitations associated with dependent claim 47 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 48 – The limitations associated with dependent claim 48 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 49 – The limitations associated with dependent claim 49 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 1, page 21 through line 3, page 37 of the specification.

Claim 50 – The limitations associated with dependent claim 50 are described in a number of places including FIG. 1 reference numbers 25 and 40; FIG 5D, reference numbers 266, 267, 268, 269, 270, 271, and line 4, page 37 through line 3, page 40 of the specification.

Claim 51 – The limitations associated with dependent claim 51 are described in a number of places including the portion of the specification that supports claim 51, FIG. 1, reference number

50 and line 16, page 27 through line 3, page 40 of the specification.

Independent claim 52 – A third embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 52 where an article of manufacture instructs a computer system to obtain data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database - is described in FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Independent claim 62 – A fourth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 62 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to transform said data into an integrated database. The integrated data are then used to create and output tools for financial management. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) transforming data representative of an organization from a plurality of systems into an integrated database that stores data in accordance with an xml metadata standard and a common schema – is described in FIG. 4, reference number 702, reference number FIG. 5A

reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

b) using at least a portion of said data to create and output one or more tools for organization management where the one or more tools for organization management further comprise a system for automated trading of an organization equity security based on a calculated market sentiment value and one or more tools selected from the group consisting of analytical models, category of value models, component of value models, market value models, network models, optimization models, simulation models, value chain models, management reports, lists of changes that will optimize one or more aspects of organization financial performance and combinations thereof – the integrated data are then analyzed in order to develop component of value models and category of value models that comprise a market value model for the value chain and each enterprise in a value chain as described in FIG. 1, reference numbers 300 and 400, FIG. 6A reference number 302, 303, 304, 305, 306, 307, 308, 309 and 310, FIG. 6B reference numbers 321, 323, 326, 327, 328 and 329, FIG. 6C reference numbers 341, 342, 343, 345, 346, 347, 348, 349 and 350, FIG. 7 reference numbers 404, 404, 409, 410, 411, 412, 413, 414 and 415; FIG. 8 reference numbers 504, 505, 506, 507, 509, 510, 511 and 512; FIG. 9 reference number 603, 604, 605, 610, 611 and 612 and line 1, page 44 through line 9, page 74 of the specification.

Claim 63 – The limitations associated with dependent claim 63 are described in a number of places including FIG. 9, reference numbers 118 and 610 and line 9 through line 13 on page 73 of the specification.

Claim 64 – The limitations associated with dependent claim 64 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 25, 30, 35 and 40; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 270, 271, 209 and 211 and line 1, page 21 through line 3, page 40 of the specification.

Claim 68 – The limitations associated with dependent claim 68 are found in a number of places including line 1, page 2 through line 18, page 7, Table 15, pages 27 and 28 and line 3, page 29 through line 6, page 30 of the specification. The development and use of a common data

dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 69 – The limitations associated with dependent claim 69 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 70 – The limitations associated with dependent claim 70 are described in a number of places including Table 1, page 8, Table 15, pages 27 and 28 and line 3, page 29 through line 6, page 30 of the specification.

Claim 90 – The limitations associated with dependent claim 90 are described in a number of places including table 3, page 10.

Claim 91 – The limitations associated with dependent claim 91 are described in a number of places including FIG. 6A reference number 302, 303, 304, 305, 306, 307, 308, 309 and 310, FIG. 6B reference numbers 321, 323, 326, 327, 328 and 329, FIG. 6C reference numbers 341, 342, 343, 345, 346, 347, 348, 349 and 350, FIG. 7 reference numbers 404, 404, 409, 410, 411, 412, 413, 414 and 415; table 3, page 10 and line 1, page 44 through line 9, page 74 of the specification.

Claim 134 – The limitations and activities associated with dependent claim 134 are described in a number of places including FIG. 6A reference number 302, 303, 304, 305, 306, 307, 308, 309 and 310, FIG. 6B reference numbers 321, 323, 326, 327, 328 and 329, FIG. 6C reference numbers 341, 342, 343, 345, 346, 347, 348, 349 and 350, FIG. 7 reference numbers 404, 404, 409, 410, 411, 412, 413, 414 and 415; table 3, page 10 and line 1, page 44 through line 9, page 74 of the specification.

Independent claim 135 – A fifth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 135 where a machine obtains data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed

cause the processor to integrate a plurality of data representative of an organization that physically exists from a plurality of organization related systems and an Internet using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database – the computer is described in FIG. 3, reference numbers 120, 121, 122, 123, 124, 125, 126, 127 and 128 and line 16, page 15 through line 4, page 17 of the specification. The process of using the computer to transform data from a plurality of organization related systems into an integrated database is described in FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 136 – The limitations associated with dependent claim 136 are described in a number of places including the portion of the specification that supports claim 135 and line 16, page 27 through line 6, page 30 of the specification,

Claim 137 – The limitations associated with dependent claim 137 are found in a number of places including line 1, page 2 through line 18, page 7, Table 15, pages 27 and 28 and line 3, page 29 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 138 – The limitations associated with dependent claim 138 are described in a number of places including lines 2 through 5, page 2, Table 15, pages 27 and 28, lines 9 through 23, page 29 and Table 16 on page 29 of the specification.

Claim 139 – The limitations associated with dependent claim 139 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification. The development and use of a common data dictionary to support data extraction, conversion and storage is also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 140 – The limitations associated with dependent claim 140 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211

and line 1, page 21 through line 3, page 37 of the specification.

Independent claim 141 – A sixth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 141 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) use metadata mapping to integrate a plurality of data representative of a physical object or substance from a plurality of systems in accordance with xml and a common schema to transform said data into an integrated database that stores data in accordance with said schema and output said database - is described in FIG 2, reference number 141, FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 142 – The limitations associated with dependent claim 142 are described in a number of places including line 12, page 29 through line 15, page 29 of the specification.

Claim 143 – The limitations associated with dependent claim 143 are described in a number of places including FIG. 6A, reference numbers 307, 308, 309 and 310 and line 8, page 49 through line 8, page 51 of the specification.

Claim 144 – The limitations associated with dependent claim 144 are described in a number of places including FIG. 2, reference number 141, FIG. 4, reference number 702, FIG. 5A, reference number 702, FIG. 5B, reference number 702, FIG. 5C, reference number 702 and FIG. 5D, reference number 702; line 16, page 27 through line 33, page 41 of the specification.

Independent claim 145 – A seventh embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in

independent claim 145 where a process uses a computer system to obtain data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) using metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database - the process of using metadata mapping to integrate data and output a database is described in FIG 2, reference number 141, FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 146 – The limitations associated with dependent claim 146 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 25, 30, 35 and 40; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 270, 271, 209 and 211 and line 1, page 21 through line 3, page 40 of the specification.

Claim 147 – The limitations associated with dependent claim 147 are described in a number of places including FIG. 2, reference number 141, FIG. 4, reference number 702, FIG. 5A, reference number 702, FIG. 5B, reference number 702, FIG. 5C, reference number 702 and FIG. 5D, reference number 702; line 16, page 27 through line 33, page 41 of the specification.

Claim 148 – The limitations associated with dependent claim 148 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification.

Claim 149 – The limitations associated with dependent claim 149 are described in a number of places including the portion of the specification that supports claim 145, FIG. 2, reference numbers 140 through 169 and line 30, page 14 through line 9, page 15 of the specification.

Independent claim 150 – An eighth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 150 where a computer obtains data from a plurality of enterprise systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database where metadata mapping is guided by a metadata mapping table – the computer is described in FIG. 3, reference numbers 120, 121, 122, 123, 124, 125, 126, 127, and 128, and line 16, page 15 through line 4, page 17 of the specification. The process of using metadata mapping to integrate and convert data from a plurality of enterprise related systems into an integrated database is described in FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282, line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

b) where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof - is described in FIG. 1 reference numbers 5, 10, 15, 30 and 35; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 1, page 21 through line 3, page 37 of the specification.

Claim 151 – The limitations associated with dependent claim 151 are described in a number of places including line 12, page 29 through line 15, page 29 of the specification.

Claim 152 – The limitations associated with dependent claim 152 are described in a number of places including FIG. 2, reference number 141, FIG. 4, reference number 702, FIG. 5A, reference number 702, FIG. 5B, reference number 702, FIG. 5C, reference number 702 and FIG. 5D, reference number 702; line 16, page 27 through line 33, page 41 of the specification.

Claim 153 – The limitations associated with dependent claim 153 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification.

Claim 154 – The limitations associated with dependent claim 154 are described in a number of places including FIG. 1 reference numbers 25 and 40; FIG 5D, reference numbers 266, 267, 268, 269, 270, 271, and line 4, page 37 through line 3, page 40 of the specification.

Independent claim 155 – An ninth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 155 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) use metadata mapping to integrate a plurality of data representative of a physical object or substance from a plurality of systems in accordance with xml and a common schema to transform said data into an integrated database that stores data in accordance with said schema and output said database - is described in FIG 2, reference number 141, FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 270, 271, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 156 – The limitations associated with dependent claim 156 are described in a number of

places including line 12, page 29 through line 15, page 29 of the specification.

Claim 157 – The limitations associated with dependent claim 157 are described in a number of places including the portion of the specification that supports claim 157, FIG. 1, reference number 50 and line 16, page 27 through line 3, page 40 of the specification.

Claim 158 – The limitations associated with dependent claim 158 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 25, 30, 35 and 40; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 270, 271, 209 and 211 and line 1, page 21 through line 3, page 40 of the specification.

Independent claim 159 – A tenth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 159 where a process uses a computer system to obtain data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 16, page 15 through line 4, page 17 of the specification.

a) using metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database - is described in FIG 2, reference number 141, FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 270, 271, 209, 211 and 702, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 160 – The limitations associated with dependent claim 160 are described in a number of places including FIG. 1 reference numbers 5, 10, 15, 25, 30, 35 and 40; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211

FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 270, 271, 209 and 211 and line 1, page 21 through line 3, page 40 of the specification.

Claim 161 – The limitations associated with dependent claim 161 are described in a number of places including FIG. 2, reference number 141, FIG. 4, reference number 702, FIG. 5A, reference number 702, FIG. 5B, reference number 702, FIG. 5C, reference number 702 and FIG. 5D, reference number 702; line 16, page 27 through line 33, page 41 of the specification.

Claim 162 – The limitations associated with dependent claim 162 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification.

Claim 163 – The limitations associated with dependent claim 163 are described in a number of places including the portion of the specification that supports claim 159, FIG. 2, reference numbers 140 through 169 and line 30, page 14 through line 9, page 15 of the specification.

Independent claim 164 – An eleventh embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 164 where a computer obtains data from a plurality of enterprise systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database where metadata mapping is guided by a metadata mapping table, where a metadata and conversion rules window is used to establish a metadata mapping table – the computer is described in FIG. 3, reference numbers 120, 121, 122, 123, 124, 125, 126, 127 and 128, and line 16, page 15 through line 4, page 17 of the specification. The process of using metadata mapping to integrate and convert data from a plurality of enterprise related systems into an integrated database is described in FIG. 4, reference number 702, reference number FIG. 5A reference numbers 202, 203, 207, 208, 209, 211 and 702, FIG 5B, reference numbers 221, 222, 225, 226, 209, 211 and 702, FIG 5C, reference numbers 241, 242, 209, 211 and 702; FIG 5D, reference numbers 261, 262, 266, 267, 268, 269, 209, 211 and 702, FIG. 5E, reference

numbers 277, 278, 279, 280, 281 and 282; line 16, page 27 through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

b) where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof – as described in FIG. 1 reference numbers 5, 10, 15, 30 and 35; FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 1, page 21 through line 3, page 37 of the specification.

Claim 165 – The limitations associated with dependent claim 165 are described in a number of places including line 12, page 29 through line 15, page 29 of the specification.

Claim 166 – The limitations associated with dependent claim 166 are described in a number of places including line 16, page 27 through line 6, page 30 of the specification.

Claim 167 – The limitations associated with dependent claim 167 are described in a number of places including FIG. 1 reference numbers 25 and 40; FIG 5D, reference numbers 266, 267, 268, 269, 270, 271, and line 4, page 37 through line 3, page 40 of the specification.

6. Grounds of rejection to be reviewed on appeal

Issue 1 – Whether claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148, claim 153 are obvious under 35 U.S.C. 103(a) given Davis in view of “Premium Drivers of Post Deal Value” in Mergers and Acquisitions (hereinafter, Bielinski), U.S. Patent 6,018,722 (hereinafter, Ray), “The 1986-88 Stock Market: Investor Sentiment or Fundamentals” (hereinafter, Baur) and Official Notice?

Issue 2 – Whether claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are obvious under 35 U.S.C. 103(a) given Davis in view of U.S. Patent 6,549,922 (hereinafter, Srivastava) and Official Notice?

Issue 3 – Whether claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and 154 are obvious under 35 U.S.C. 103(a) Davis in view of Official Notice?

Issue 4 – Whether claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 represent statutory subject matter under 35 USC §101?

Issue 5 – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42 and claim 43 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

Issue 6 – Whether claim 44, claim 45, claim 46, claim 47, claim 50, claim 51 and claim 52, are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

Issue 7 – Whether claim 135, claim 136, claim 137 and claim 138 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

Issue 8 – Whether claim 141, claim 142, claim 143, claim 145 and claim 149 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

Issue 9 – Whether claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are enabled under 35 U.S.C. §112, first paragraph?

Issue 10 – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are indefinite under 35 U.S.C. §112, second paragraph?

7. The Argument

For each ground of rejection which Appellant contests herein which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand and fall together.

Issue 1 – Whether claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153 are obvious under 35 U.S.C. 103(a) given Davis in view of Bielinski, Ray, Baur and/or Official Notice?

The claims are patentable because the claim rejections are based on several hundred errors in

the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Davis, Ray, Baur and Official Notice) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 11 – It is well established that: "*in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).*" Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by a failure to acknowledge the fact that the cited documents teach away from the claimed invention include:

Error #1) A failure to acknowledge that Davis teaches away from the claimed creation of an integrated database. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away from the creation of an integrated database by teaching the storage of information that can be used to guide the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230). Davis also teaches away from the creation of an integrated database by teaching the placement of RDML conversion information (504) in the source databases (230). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

Error #2) A failure to acknowledge that Davis teaches away from the claimed creation and output of tools for organization management. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away by teaching that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data on demand. By way of contrast the claimed invention creates and outputs several different tools for organization management. Each of these tools can obtain and process data independently without a special viewer or formatting tool. By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim

69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

Error #3) A failure to acknowledge that Davis teaches away from the claimed use of a common schema. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away from the claimed integration using a common schema by teaching that data from disparate systems is matched where possible and that data that cannot be matched are simply appended to a dictionary (see Davis, Column 15, line 15 through line 47). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

Error #4) A failure to acknowledge that Davis teaches away from the claimed method of storing data. Davis teaches away from every aspect of the claimed invention. In particular, the claimed invention teaches the storage of converted data in an integrated database. By way of contrast, Davis teaches the storage of data by line and/or document in accordance with a common dtd (see Davis, Column 21, line 58 and FIG. 13). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

Error #5) A failure to acknowledge that Bielinski teaches away from the claimed trading of equity securities based on a calculated market sentiment value. Bielinski teaches away from every aspect of the claimed invention. In particular, Bielinski teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including the use of a single tree of equations to calculate cash flow and an enterprise value, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow. The method taught by Bielinski (VBM and SVA) also relies on the standard valuation model which teaches that there is no market sentiment (see Evidence Appendix, pages 114 – 115). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below.

Categories of value per 09/940,450	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error #6) A failure to acknowledge that Ray also teaches away from the claimed trading of equity securities based on a calculated market sentiment value. Ray teaches away from every aspect of the claimed invention. In particular, Ray teaches a reliance on the now discredited modern portfolio theory (see Evidence Appendix, pages 116 - 117), which explicitly teaches that there is no market sentiment value (Ray, Column 2, Line 36). The Ray invention uses modern portfolio theory to determine the relative ranking of securities that should be traded to help match a subjectively determined profile established by an investor. By exclusively teaching methods that teach away from the claimed invention, Ray provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error #7) A failure to acknowledge that Baur also teaches away from the claimed trading of equity securities based on a calculated market sentiment value. Baur teaches away from every aspect of the claimed invention. In particular, Baur teaches analyzing and modeling the correlation between "investor sentiment" and weekly price changes for the S&P 500. Share prices reflect the combined value of all categories of value in an enterprise which precludes a separate analysis of a market sentiment category of value. Baur also teaches away from analyzing and modeling an enterprise by element of value as it focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 110 - 113). Share prices reflect the combined contribution of all the elements of value in an enterprise. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error #8) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions. Bielinski teaches away from every aspect of the claimed invention. Bielinski teaches the use of a single tree of equations to calculate an enterprise value and that enterprise cash flow is the sole determinant of value. Implicit in these teachings are three assumptions that teach

away from the claimed method: the relationship between input values and actual cash flow is linear, there is no need to consider factors that have an indirect relationship to cash flow and the market is strong form, market efficient (aka market sentiment value is zero). Bielinski does not teach that there is more than there is any alternative to reliance on the assumptions outlined above and shown in the Table below.

Assumptions	09/940,450	Bielinski
Relationship of inputs to actual levels	None, inputs may have a linear or non-linear effect on the value of the categories of value	Inputs have a linear effect on cash flow
Inputs analyzed	Elements of value that may have a direct and/or an indirect impact on category values	Activities, counts, expenditures and summary measures that have a direct relationship to cash flow
Market efficiency	None, market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero)	Market is strong form, efficient (aka standard valuation model) and market sentiment value is zero

By way of contrast, the claimed inventions teach and rely on the fact that a model for cash flow or other categories of value can utilize a non-linear and/or an indirect relationship between input values and the actual value. In a similar fashion, the claimed invention does not make any assumptions about market efficiency (see Table). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error #9) A failure to acknowledge that Bielinski teaches away from the claimed optimization of one or more aspects of an enterprise financial performance. Bielinski teaches away from every aspect of the claimed invention. In particular, Bielinski teaches the use of sensitivity analysis and break even analysis to identify desirable changes in operation. Bielinski also teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. By way of contrast, the claimed invention teaches and relies on the use of objective optimization analyses to identify the most desirable set of changes to optimize a future value of one or more aspects of business financial performance. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error #10) A failure to acknowledge that Bielinski teaches away from the claimed analysis

and modeling of the elements of value. Bielinski teaches away from every aspect of the claimed invention. In particular, Bielinski teaches the use of a single tree of equations to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM cash flow tree consist of: activities (i.e. volume of calls received, number of transactions completed and pounds of material used), counts (i.e. number of service delivery centers and number of employees), expenditure data (i.e. material costs, employee annual salary and cost per station), and summary financial measures (i.e. inventory turnover ratio and sales growth rate). These low level inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow (and the other categories of value) and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation model. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 134.

Error #11) A failure to acknowledge that Ray teaches away from the claimed analysis and modeling of the elements of value. Ray teaches away from every aspect of the claimed invention. In particular, Ray teaches away from analyzing and modeling an enterprise by element of value as it teaches the analysis of securities as a whole. As is well known to those of average skill in the art, the price of security reflects the value of all elements of value within a company. Because the cited documents exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established. By exclusively teaching methods that teach away from the claimed invention, Ray provides additional evidence of the novelty, non-obviousness and newness of claim 134.

Error 12 - It is well established that *"in order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned."* *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992). Error 12 arises from the fact that the cited references (Bielinski, Ray and Baur) are not reasonably pertinent to the claimed invention as they teach that there is no market sentiment value. As is now well known to those of average skill in the

art, the theories that supported this teaching have all been discredited (see Evidence Appendix, pages 116 - 117). Because the cited references are not pertinent to the claimed invention, the claim rejections are improper and the prima facie case of obviousness cannot be established. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Errors 13 through 58 - It is well established that *"when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim.* Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #13 through #19) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 62 (affects claims 63, 64, 68, 69, 70, 90, 91 and 134). Limitations not taught or suggested include:

- a) transforming data representative of an organization from a plurality of systems into an integrated database that stores data in accordance with an xml metadata standard and a common schema (#13),
- c) a system for automated trading of an organization equity security based on a calculated market sentiment value (#14),
- d) category of value models (#15),
- e) network models (#16),
- f) optimization models (#17),
- g) value chain models (#18), and
- h) lists of changes that will optimize one or more aspects of organization financial performance (#19).

Error #20) Failure to acknowledge the fact that the cited documents do not teach or suggest

one or more limitations of claim 68. Limitations not taught of suggested include: *where a common schema defines common attributes selected from the group consisting of data structure, organization designation, data dictionary and combinations thereof.*

Errors #21 through #26) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 69. Limitations not taught of suggested include: *where the data dictionary defines standard data attributes from the group consisting of account numbers (#21), components of value (#22), elements of value (#23), organization designations (#24), time periods (#25) and units of measure (#26).*

Errors #27 through #31) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 90. Limitations not taught of suggested include: *wherein the one or more aspects of organization financial performance are selected from the group consisting of organization capital change (#27), organization current operation value (#28), organization real option value (#29), organization market sentiment value (#30), organization market value (#31) and combinations thereof.*

Errors #32 through #45) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 91. Limitations not taught of suggested include: *where the identified changes are changes to alliance value drivers (#32), brand value drivers (#33), channel value drivers (#34), customer value drivers (#35), customer relationship value drivers (#36), employee value drivers (#37), equipment value drivers (#38), intellectual property value drivers (#39), partnership value drivers (#40), process value drivers (#41), production equipment value drivers (#42), vendor value drivers (#43), vendor relationship value drivers (#44), organization equity (#45) and combinations thereof.*

Error #46) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 134. Limitations not taught of suggested include: *a system that learns the relative importance of the different elements of value, categories of value and enterprises in determining organization financial performance as required to support the development of one or more tools for organization management.*

Errors #47 through #52) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 148. Limitations not taught of suggested include: *a common schema that identifies data designations selected from the group consisting of components of value (#47), sub components of value (#48), known value drivers (#49), elements of value (#50), sub elements of value (#51), non-relevant attributes (#52) and combinations thereof.*

Errors #53 through #58) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 153. Limitations not taught of suggested include: *a common schema that identifies data designations selected from the group consisting of components of value (#53), sub components of value (#54), known value drivers (#55), elements of value (#56), sub elements of value (#57), non-relevant attributes (#58) and combinations thereof.*

Errors 59 through 67 It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*”. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that changes in the principles of operation of the cited documents will be required to replicate the invention described in the rejected claims include:

Error #59) One principle of operation that Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, page 115). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91 and 134.

Error #60) One principle of operation that Davis relies on is that RDML conversions are completed using a viewer or formatter that produce small amounts of data with a common dtd on demand. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that all data are converted and stored in a single, integrated database (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91, 134, 148 and 153.

Error #61) A second principle of operation that Bielinski relies on is that a single tree of equations can be used to identify the inputs that are related to the actual amount of enterprise cash flow, calculate prior period cash flow and calculate an enterprise value (see Evidence Appendix related appeal for 09/764,068, pages 67 through 71). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the

only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). A single tree of equations cannot be used to determine the actual amount of enterprise cash flow and/or calculate an enterprise value from the inputs used in the claimed analyses and changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention. Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91 and 134.

Error #62) A second principle of operation that Davis relies on is the use of multiple databases (RDML conversion information is stored in an image database separate from source data). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that xml conversion information and converted data are stored in a single, integrated database (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91, 134, 148 and 153.

Error #63) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of elements of value. Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91 and 134.

Error #64) A third principle of operation that Davis relies on is that "data field mapping" is used to map from source databases to an RDML document defined by a dtd. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that "metadata mapping" is used to map from source database metadata to integrated database metadata (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness

cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91, 134, 148 and 153.

Error #65) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that have a direct, linear relationship to actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski. Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91 and 134.

Error #66) A fourth principle of operation that Davis relies on is that data are stored by line or document in accordance with a dtd (see Davis, Column 21, line 58). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that data are stored in a database in accordance with a common schema (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91, 134, 148 and 153.

Error #67) One principle of operation that Ray relies on is that securities in investment portfolios can be selected on the basis of individual preferences. Said portfolios are then adjusted for the economic environment and potential changes to the portfolio are ranked on the basis of the now discredited modern portfolio theory (AKA Capital Asset Pricing Model). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that securities will be bought or sold on the basis of a calculated market sentiment value. Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claims 62, 63, 64, 68, 69, 70, 90, 91 and 134.

Error 68 – It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. The claimed computational model of enterprise market value by element of value and category of value comprises predictive models for one or two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches and relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise

cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function (see Evidence Appendix related appeal for 09/764,068, pages 67 – 71). It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its function, the prima facie case of obviousness cannot be properly made. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error 69 – It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. The function of the Ray invention is to use the now discredited modern portfolio theory (see Evidence Appendix, pages 116 - 117) to identify the best securities to add to a portfolio that is designed to satisfy the subjective goals and preferences of an investor. The investor goals and preferences are identified in a questionnaire. By way of contrast, the claimed invention trades securities solely on the basis of a calculated market sentiment value. Modifying the Ray invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Ray invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

Error 70 – It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined after the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would

destroy its ability to perform its intended function and purpose by displaying all the data from all data sources in a graph or table. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153.

Errors 71 through 73 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #71) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness “mentions the same word as another document” instead of “teaches or suggests the subject matter as a whole” as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the “*Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.*” *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 70, it does not appear that any of the claim limitations were actually considered. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153.

Error #72) Failure to acknowledge the fact that the claimed invention comprises a surprising result – market sentiment (as defined) is relevant to securities trading. This is surprising because the teachings of all the references provided by the Examiner, namely that markets are always efficient and that security prices are always accurate, have surprisingly been found to be incorrect (see Evidence Appendix, pages 116 – 117). Affects all claims.

Error #73) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Error #72). It is well established that the

"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Davis or Ray as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 72. Affects all claims.

Error 74 – It is well established *that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396)."* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski, Davis and Ray inventions and modify the principle of operation of all the references as discussed under errors 59 through 70. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 58. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has made dozens of errors in the facts and the law (including errors 71 through 73). Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153.

Errors 75 and 76 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #75 Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 74 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and

claim 153 and that as a result the rejections fail to meet the substantial evidence standard.

Error #76) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 70);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 71 through 73),
- c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 74), and
- d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on 76 errors in the facts and the law. When the 76 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 1 is three hundred eight six (386). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 2 – Whether claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are obvious under 35 U.S.C. 103(a) given Davis in view Srivastava and Official Notice?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Davis, Srivastava and Official Notice) and the arguments related to the cited combination of teachings

fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 8 – It is well established that: *"in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983))."* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by a failure to acknowledge the fact that the cited documents teach away from the claimed invention include:

Error #1) A failure to acknowledge that Davis teaches away from the claimed creation of an integrated database. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away from the creation of an integrated database by teaching the storage of information that can be used to guide the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230). Davis also teaches away from the creation of an integrated database by teaching the placement of RDML conversion information (504) in the source databases (230). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #2) A failure to acknowledge that Davis teaches away from the claimed creation and output of a database. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away by teaching that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data on demand. By way of contrast the claimed invention creates a database that makes the data readily available for use (aka outputs the database) without a special viewer or formatting tool. By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #3) A failure to acknowledge that Davis teaches away from the claimed use of a common schema. Davis teaches away from every aspect of the claimed invention. In

particular, Davis teaches away from the claimed integration using a common schema by teaching that data from disparate systems is matched where possible and that data that cannot be matched are simply appended to a dictionary (see Davis, Column 15, line 15 through line 47). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #4) A failure to acknowledge that Davis teaches away from the claimed method of storing data. Davis teaches away from every aspect of the claimed invention. In particular, the claimed invention teaches the storage of converted data in an integrated database. By way of contrast, Davis teaches the storage of data by line and/or document in accordance with a common dtd (see Davis, Column 21, line 58 and FIG. 13). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #5) A failure to acknowledge that Srivastava teaches away from the claimed integrated database. Srivastava teaches away from every aspect of the claimed invention. The claimed invention teaches using metadata mapping to create an integrated database that is used to store and manage data. Srivastava teaches away by teaching the creation of a database that is primarily used to store and manage metadata (i.e. a unified metadata repository, see Srivastava abstract). By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #6) A failure to acknowledge that Srivastava teaches away from the claimed use of a common schema. Srivastava teaches away from every aspect of the claimed invention. The claimed invention teaches the transformation of data into an integrated database that uses a common schema. Srivastava teaches away by teaching the ad hoc creation of metadata summaries from the media file data without requiring the use of common definitions (aka common schema) for the metadata being stored in the unified metadata repositories (see Srivastava, abstract). By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158,

claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #7) A failure to acknowledge that Srivastava teaches away from the claimed use of metadata mapping. Srivastava teaches away from every aspect of the claimed invention. The claimed invention teaches using metadata mapping to create an integrated database that is used to store and manage data. Srivastava teaches away by teaching document element mapping from xml documents to a database schema (see Srivastava, Column 8, lines 37 through 41). By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #8) A failure to acknowledge that Davis teaches away from the claimed use of metadata mapping. Davis teaches away from every aspect of the claimed invention. The claimed invention teaches using metadata mapping to create an integrated database that is used to store and manage data. Davis teaches away by teaching data field mapping from source databases to an RDML document (see Davis, Column 15, lines 24 through 26). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Errors 9 through 40 - It is well established that *"when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)). Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added).* In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #9 through #11) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 144. Limitations not taught or suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database (#9),*
- b) use a set of integration and conversion rules established using a metadata and conversion rules window (#10), and*
- c) where the set of integration and conversion rules are saved in a metadata mapping table (#11).*

Errors #12 through #13) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 147. Limitations not taught of suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database (#12), and*
- b) use a set of integration and conversion rules are established using a metadata and conversion rules window (#13).*

Errors #14 through #15) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 152. Limitations not taught of suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database (#14), and*
- b) use a set of integration and conversion rules that are established using a metadata and conversion rules window (#15).*

Errors #16 through #18) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 155. Limitations not taught of suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database (#16),*
- b) use a set of integration and conversion rules are established using a metadata and conversion rules window (#17), and*
- c) where the set of integration and conversion rules are saved in a metadata mapping table (#18).*

Errors #19 and #20) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claims 156 and 165. Limitations not taught of suggested include: *wherein at least some data are pre-specified for integration and conversion (#19 and #20).*

Error #21) Failure to acknowledge the fact that the cited documents do not teach or suggest

one or more limitations of claim 157. Limitations not taught of suggested include: *wherein a plurality of integrated enterprise data are stored in an application database in accordance with a common schema* (#21).

Error #22) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 161. Limitations not taught of suggested include: *wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table* (#22).

Errors #23 through #34) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 162 and 166. Limitations not taught of suggested include: *wherein a common schema identifies data designations selected from the group consisting of components of value* (#23, #24), *sub components of value* (#25, #26), *known value drivers* (#27, #28), *elements of value* (#29, #30), *sub elements of value* (#31, #32), *non-relevant attributes* (#33, #34) *and combinations thereof*.

Error #35) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 163. Limitations not taught of suggested include: *storing a plurality of converted data in one or more tables to support organization processing* (#35).

Errors #36 through #38) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 164. Limitations not taught of suggested include:

- a) *use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database* (#36),
- b) *use a set of integration and conversion rules established using a metadata and conversion rules window* (#37),
- c) *where the set of integration and conversion rules are saved in a metadata mapping table* (#38), *and*
- d) *where metadata mapping is guided by a metadata mapping table* (#39).

Error #40) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 167. Limitations not taught of suggested include: *wherein at least a portion of the data are obtained from an Internet or an external database* (#39).

Errors 41 and 42 – It is well established that *it is improper to combine references where the references teach away from their combination*. In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). Errors in the claim rejections caused by the apparent failure to

acknowledge the fact that the cited documents teach away from their own combination include:

Error #41) As shown in the table below, the two documents teach the exact opposite approach to data acquisition. The table shows again that the two documents also teach away from the claimed invention.

Davis	Srivastava	09/940,450
Map from databases to documents	Map from documents to a database	Map from database to database

Because the documents teach away from their own combination, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #42) As shown in the table below, the two documents also teach different approaches to data storage. The table also shows again that the two documents both teach away from the claimed invention.

Davis	Srivastava	09/940,450
Data are stored by line or document in accordance with a dtd	Data stored in files without requiring common definitions	Data stored in tables in accordance with a common schema

Because the documents teach away from their own combination, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Errors 43 through 48 – It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Errors in the claim rejections caused by the apparent failure to acknowledge the fact that changes in the principles of operation of the cited documents will be required to replicate the invention described in the rejected claims include:

Error #43) One principle of operation that Davis relies on is the use of multiple databases (RDML conversion information is stored in an image database separate from source data). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that xml conversion information is stored in a single, central database along with the converted data (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness

cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #44) A second principle of operation that Davis relies on is that RDML conversions are completed using a viewer or formatter that produce small amounts of data with a common dtd on demand. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that all data are converted and stored in a single, integrated database (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #45) A third principle of operation that Davis relies on is that "data field mapping" is used to map from source databases to an RDML document defined by a dtd. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that "metadata mapping" is used to map from source database metadata to integrated database metadata (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #46) A fourth principle of operation that Davis relies on is that data are stored by line or document in accordance with a dtd (see Davis, Column 21, line 58 and FIG. 13). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that data are stored in a database in accordance with a common schema (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #47) One principle of operation that Srivastava relies on is the ad hoc creation of metadata summaries from media file data without requiring the use of common definitions (aka common schema) for the metadata being stored in the unified metadata repositories (see Srivastava, abstract). This principle of operation would have to be changed to replicate

the functionality of the claimed invention and recognize the fact that data are stored in accordance with a common set of definitions (aka a common schema, see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #48) A second principle of operation that Srivastava relies on is "document element mapping" to map elements from xml documents to a database schema. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that "metadata mapping" is used to map from source database metadata to integrated database metadata (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error 49 – It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined **after** the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose as all data would be presented in a graph or table. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error 50 – It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. The function of the Srivastava invention is to establish metadata repositories that can be used for indexing and searching (Srivastava, abstract). In accordance with the Srivastava invention, the metadata that will be stored in the repositories is developed in an ad hoc manner by extracting and transforming information from media files. By way of contrast, the system of the present invention stores data in accordance with a common set of definitions (aka a common schema). Modifying the Srivastava invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function as the common set of definitions may not reflect the actual content of the media files and the resulting descriptions would be of little or no use in a search or index. Because the required modification of the Srivastava invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Errors 51 through 53 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #51) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness “mentions the same word as another document” instead of “teaches or suggests the subject matter as a whole” as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994)*. As detailed under errors 1 through 50, it does not appear that any of the claim limitations were actually considered. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim

162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Error #52) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author said claim rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art"* *Ex parte Hiymizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Davis or Srivastava as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 51.

Error #53) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Error #52).

Error 54 – It is well established that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn* 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396).” In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Davis and Srivastava inventions and modify their principles of operation as discussed under errors 43 through 53. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods, fail to teach or suggest almost every claim limitation, and/or teach away from their own combination as discussed under errors 1 through 42. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has made dozens of errors in the facts and the law (including errors 71 through 73). Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established. Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

Errors 55 and 56 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the

Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #55) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 54 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 and that as a result the rejections fail to meet the substantial evidence standard.

Error #56) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 50);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 51 through 53),
- c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 54), and
- d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on 56 errors in the facts and the law. When the 56 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 2 is three hundred ninety two (392). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy

the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 3 – Whether claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are obvious under 35 U.S.C. 103(a) Davis in view of Official Notice?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Davis, and Official Notice) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 5 – It is well established that: *"in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983))."* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by a failure to acknowledge the fact that the cited documents teach away from the claimed invention include:

Error #1) A failure to acknowledge that Davis teaches away from the claimed creation of an integrated database. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away from the creation of an integrated database by teaching the storage of information that can be used to guide the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230). Davis also teaches away from the creation of an integrated database by teaching the placement of RDML conversion information (504) in the source databases (230). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #2) A failure to acknowledge that Davis teaches away from the claimed creation and output of a database. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away by teaching that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data on

demand. By way of contrast the claimed invention creates and outputs a database that makes the data readily available for use without a special viewer or formatting tool. By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #3) A failure to acknowledge that Davis teaches away from the claimed use of a common schema. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away from the claimed integration using a common schema by teaching that data from disparate systems is matched where possible and that data that cannot be matched are simply appended to a dictionary (see Davis, Column 15, line 15 through line 47). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #4) A failure to acknowledge that Davis teaches away from the claimed method of storing data. Davis teaches away from every aspect of the claimed invention. In particular, the claimed invention teaches the storage of converted data in an integrated database. By way of contrast, Davis teaches the storage of data by line and/or document in accordance with a common dtd (see Davis, Column 21, line 58 and FIG. 13). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #5) A failure to acknowledge that Davis teaches away from the claimed use of metadata mapping. Davis teaches away from every aspect of the claimed invention. The claimed invention teaches using metadata mapping to create an integrated database that is used to store and manage data. Davis teaches away by teaching data field mapping from source databases to an RDML document (see Davis, Column 15, lines 24 – 26). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Errors 6 through 76 - It is well established that “when determining whether a claim is obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’ *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ *CFMT, Inc. v. Yieldup*

Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Furthermore, the Board of Patent Appeal and Interferences recently confirmed (*In re Wada and Murphy*, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (*emphasis added*). In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #6 through #10) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 40, 48 and 139. Limitations not taught or suggested include:

- a) *integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database (#6), and*
- b) *where the common schema has a data dictionary (#7) that defines standard data attributes from the group consisting of account numbers (#8), components of value (#9), elements of value (#10).*

Errors #11 through #12) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 150 (affects claims 151 and 154). Limitations not taught or suggested include:

- a) *use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database (#11), and*
- b) *where metadata mapping is guided by a metadata mapping table (#12).*

Error #13) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 151. Limitations not taught or suggested include: *wherein at least some data are pre-specified for integration and conversion (#13).*

Error #14) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 154. Limitations not taught or suggested include: *external databases (#14).*

Errors 15 through 19 – It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima*

facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)". Errors in the claim rejections caused by the apparent failure to acknowledge the fact that changes in the principles of operation of the cited documents will be required to replicate the invention described in the rejected claims include:

Error #15) One principle of operation that Davis relies on is the use of multiple databases (RDML conversion information is stored separately from source data). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that xml conversion information is stored in a single, central database along with the converted data (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #16) A second principle of operation that Davis relies on is that RDML conversions are completed using a viewer or formatter that produce small amounts of data with a common dtd on demand. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that all data are converted and stored in a single, integrated database (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #17) A third principle of operation that Davis relies on is that "data field mapping" is used to map from source databases to an RDML document defined by a dtd. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that "metadata mapping" is used to map from source database metadata to integrated database metadata (see Evidence Appendix, pages 100 - 109). Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #18) A fourth principle of operation that Davis relies on is that data are stored by line or document in accordance with a dtd (see Davis, Column 21, line 58 and FIG. 13). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that data are stored in a database in accordance with a common schema (see Evidence Appendix, pages 100 - 109). Because the required modification changes a

principle of operation, the prima facie case of obviousness cannot be established. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #19) A fifth principle of operation that Davis relies on is that data mapping is guided by a dictionary (see Davis, Column 33, line 40 through line 47). This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that data mapping is guided by a metadata mapping table. Because the required modification changes a principle of operation, the prima facie case of obviousness cannot be established. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error 20 – It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q. 1125 Fed Circuit 1984)*. The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined **after** the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose as all data would be presented in a graph or table. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Errors 21 through 23 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to*

which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #21) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the "*Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.*" *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 20, it does not appear that any of the claim limitations were actually considered. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Error #22) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author said claim rejections. It is well established that the "*hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art*" *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Davis as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 21. Affects all claims.

Error #23) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Error #21).

Error 24 – It is well established that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn* 41 stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (*KSR*, 550 U.S. at 1, 82 USPQ2d at 1396)." In spite of this well know requirement,

the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Davis invention and modify its principles of operation as discussed under errors 15 through 20. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods fail to teach or suggest almost every claim limitation, and/or teach away from their own combination as discussed under errors 1 through 14. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has made dozens of errors in the facts and the law (including errors 21 through 23). Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established. Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Errors 25 and 26 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #25) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 24 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 and that as a result the rejections fail to meet the substantial evidence standard.

Error #26) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 20);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 21 through 23),
- c) no rational underpinning has been provided to support the legal conclusion of

obviousness (see error 24), and

d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on 25 errors in the facts and the law. When the 25 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 3 is one hundred ninety three (193). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 4 – Whether claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 represent statutory subject matter under 35 USC §101?

The claims are patentable because the claim rejections are based on over a hundred errors in the facts and in the law. Because of these errors the relevant Office Action failed to establish a prima facie case of non statutory subject matter for every rejected claim as detailed below.

Errors 1 through 3 – It is well established “*the burden is on the USPTO to set forth a prima facie case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation.* (See, e.g., *In re Nuijten*, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18)). Errors in the claim rejections caused by a failure to provide an explanation include:

Error #1) Is a failure to explain how the claimed inventions can be completed using mental processes. In particular, an explanation as to how an individual can complete the claimed analyses and transformations needs to be provided. In a similar manner, an explanation as to how an individual can create and output a database using only mental processes needs to be provided. Affects all claims.

Error #2) Is a failure to explain why the claims are rejected as being non statutory after considering the fact that the Supreme Court has specifically stated “[a] process may be

patentable irrespective of the particular form of the instrumentalities used" (Cochrane v. Deener, 94 U. S. 780). Affects all claims.

Error #3) is a failure to explain why the claims are considered to be non statutory when the Supreme Court and the CAFC (Bilski) have both found that processes that transform data regarding real world activities and/or objects into a different state or thing to be statutory subject matter. The claimed inventions all transform data regarding real world objects into a different state or thing.

In short, the complete absence of a logical explanation leads to the inevitable conclusion that the Examiner has failed to establish a prima facie case that would support a §101 rejection for a single claim.

Error 4 – Comprises a failure to acknowledge that the conclusory statement that appears to be the sole basis for the claim rejections is demonstrably false. It is well known to those of average skill in the art that human beings cannot reliably process more than four variables at a time (see Evidence Appendix, page 99 for confirmation). Those of average skill in the art will also recognize that claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 all involve the simultaneous manipulation of numbers of variables and "chunks" of working memory that are several orders of magnitude greater than the four variables or chunks a human can process with an acceptable degree of accuracy. Putting these facts together it is clear that the stated basis for the claim rejection is demonstrably false and that the claimed inventions cannot be completed solely by the use of mental processes. Furthermore, the stated basis for these claim rejections adds to the substantial evidence that those authoring and/or approving the §101 rejections do not appear to have the capability of understanding the scientific and engineering principles applicable to the pertinent art. Affects all claims.

Error 5 – As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6).* In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea."* State Street, 149 F.3d at 1373. In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea."* Id. Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical*

application of a mathematical algorithm." *Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data transformed by a process must represent an object or substance that physically exists. Error #5 is a failure to acknowledge that claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 describe processes for transforming data representative of things that physically exist (i.e. an organization) into a different state or thing: an integrated database that has utility in enabling forecasts, business performance analyses and simulations. As such they represent statutory subject matter.

Errors 6 and 7 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of USPTO findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #6) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 5 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the non statutory subject matter rejection of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 and that as a result the rejections fail to meet the substantial evidence standard.

Error #7) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the non statutory subject matter rejection of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) no evidence has been provided to support the legal conclusion of non statutory subject matter (see errors 1 through 4),
- b) there is no rational connection between the statutory requirements for non statutory subject matter rejections and the agency fact findings (see error 5),

- c) there is no rational connection between the U.S.P.T.O.'s fact-findings associated with the allowance and issue of U.S. Patent 6,732,095 (hereinafter, Warshavsky) and the claim rejections for non statutory subject matter,
- d) there is no rational connection between the U.S.P.T.O.'s fact-findings associated with the allowance and issue of Davis and the claim rejections for non statutory subject matter,
- e) there is no rational connection between the U.S.P.T.O.'s fact-findings associated with the allowance and issue of U.S. Patent 7,177,822 (hereinafter, Mahmood) and the claim rejections for non statutory subject matter, and
- f) prior agency fact-findings have shown that 35 U.S.C. 101 requirements for statutory subject matter are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

Summarizing the above, the Examiner has based the claim rejections under this issue on 7 errors in the facts and the law. When the 7 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 4 is one hundred twenty six (126). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of non statutory subject matter can not be properly established.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the two prong test and that the claims describe inventions that support a number of practical applications with substantial, specific utilities and that they therefore represent statutory subject matter.

Issue 5 – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, and claim 43 are anticipated under 35 USC §102(e) by Davis?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited document (Davis) and the arguments related to the cited document fail to establish a prima facie case of anticipation for every rejected claim as detailed below.

Errors 1 through 17 – It is well established that: “A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently described in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Errors in the claim rejections caused by the apparent failure of the cited document to expressly or inherently describe elements of a claim include:

Errors #1 through #3) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 34 (also affects claim 35, claim 36, claim 37, claim 38, claim 39, claim 42 and claim 43). Elements that are not expressly or inherently described include:

- a) integrating data from a plurality of systems using xml and a common schema* – the Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDML viewer (#1);
- b) transforming said data into an integrated database then output said database* – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230) and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format on demand (#2); and
- c) where said data is representative of a physical object* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object (#3).

Errors #4 and #5) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 35. Elements that are not expressly or inherently described include:

- a) a physical object that comprises an organization* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object or an organization (#4), and
- b) a common schema that includes an organization designation* – the Davis document does not expressly or inherently teach a schema of any kind as it teaches the use of a dtd as mentioned previously (#5).

Errors #6 through #12) Failure to acknowledge the fact that Davis does not expressly or inherently describe an element of claim 36. Elements that are not expressly or inherently described include:

- a) a common schema that includes an organization designation* – the Davis document does not expressly or inherently teach a schema of any kind as it teaches the use of a dtd as mentioned previously (#6).

b) wherein the designated organization is a single product (#7), a group of products (#8), a division (#9), a company (#10), a multi-company corporation (#11) or a value chain (#12).

Error #13) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 37. Elements that are not expressly or inherently described include a common schema that is statistically valid and includes a data structure (#13).

Error #14) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 38. Elements that are not expressly or inherently described include a common schema is statistically valid and includes a hierarchy (#14).

Error #15) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 39. Elements that are not expressly or inherently described include a common schema that includes a data dictionary (#15).

Error #16) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 42. Elements that are not expressly or inherently described include the integration of data from an external database (#16).

Error #17) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 43. Elements that are not expressly or inherently described include converting data to match a common schema and storing the converted data in a central database (#17). See discussion under errors 1 through 3 of this issue.

Errors 18 through 34 – It is well established that in order to reject a claim based on anticipation: *"The identical invention must be shown in as complete detail as is contained in the . claim."* *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Errors in the claim rejections caused by the apparent failure of the cited document to use the same level of detail included in a claim include:

Errors #18 through #20) Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 34 (also affects claim 35, claim 36, claim 37, claim 38, claim 39, claim 42 and claim 43), including:

- a) *integrating data from a plurality of systems using xml and a common schema (#18);*
- b) *transforming said data into an integrated database (#19);* and
- c) *where said data is representative of a physical object (#20).*

Errors #21 and #22) Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 35, including:

- a) *a physical object that comprises an organization (#21), and*
- b) *a common schema that includes an organization designation – the Davis document does not expressly or inherently teach a schema of any kind as it teaches the use of a dtd as mentioned previously (#22).*

Errors #23 through #29 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 36, including:

- a) *a common schema that includes an organization designation (#23),*
- b) *wherein the designated organization is a single product (#24), a group of products (#25), a division (#26), a company (#27), a multi-company corporation (#28) or a value chain (#29).*

Error #30 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 37, namely a common schema that is statistically valid and includes a data structure (#30).

Error #31 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 38, namely a common schema is statistically valid and includes a hierarchy (#31).

Error #32 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 39, namely a common schema that includes a data dictionary (#32).

Error #33 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 42. Elements that are not expressly or inherently described include the integration of data from an external database (#33).

Error #34 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 43. Elements that are not expressly or inherently described include converting data to match a common schema and storing the converted data in a central database (#34).

Errors 35 through 42 – It is well established that that: “*in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.*” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In spite of this well known requirement, no explanation was provided. In spite of this well known requirement, the Examiner has failed to provide the technical reasoning required to sustain the

rejection of claim 34 (#35), claim 35 (#36), claim 36 (#37), claim 37 (#38), claim 38 (#39), claim 39 (#40), claim 42 (#41) and claim 43 (#42).

Errors 43 through 55 – It is well established that that: “*in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing In re Omeprazole Patent Litigation, 483 F.3d 1364, 1379 (Fed. Cir. 2007)).* The methods disclosed in the Davis document do not enable the completion of a single claim. Replicating the functionality of the rejected claims would require the alteration or removal of a number of methods taught by Davis. It would also require the addition of a number of new capabilities not described by Davis. Extensive and undue experimentation would be required to support both steps. Errors in the claim rejections caused by the failure to acknowledge the need for extensive and undue experimentation include:

Error # 43) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the reliance on an RDML viewer (100) or formatter (216) to combine data from different sources into a single document or view taught by Davis,

Error # 44) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the reliance on an image database (226) to store conversion information taught by Davis,

Error # 45) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the reliance on processing, storing and viewing data by pre-specified line taught by Davis,

Error # 46) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the reliance on documents for data storage taught by Davis,

Error # 47) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the use of a data type definition (aka dtd) for establishing a common format in a viewer or document taught by Davis,

Error # 48) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the exclusive use of flat files or tables for data input taught by Davis, and

Error # 49) A failure to acknowledge that extensive and undue experimentation would be required to unlearn the reliance on inserting a table (504) that holds information regarding the data tables into the data source database (230) for later reference taught by Davis.

It is well known to those of average skill in the art that unlearning “known” methods is often the most difficult part of learning for people of all ages. Extensive and undue experimentation would

be required to reveal the fact that the listed Davis methods have serious shortcomings and should be unlearned (or forgotten). After this extensive and undue experimentation revealed the need for unlearning, there would still be a need for additional experimentation to discover the new capabilities that should be added and the best way to add said capabilities. In particular, additional errors in the claim rejections caused by the failure to acknowledge the need for extensive and undue experimentation include:

Error # 50) A failure to acknowledge that extensive and undue experimentation would be required to learn a method for mapping from data source metadata to the metadata for a common schema,

Error # 51) A failure to acknowledge that extensive and undue experimentation would be required to learn a method for converting large volumes of data being extracted from a plurality of databases to a common format by item,

Error # 52) A failure to acknowledge that extensive and undue experimentation would be required to learn a method for converting large volumes of data being extracted from a plurality of databases to common units of measure by item,

Error # 53) A failure to acknowledge that extensive and undue experimentation would be required to learn a method for extracting data from a plurality of databases incorporating the methods identified under error 50, error 51 and error 52,

Error # 54) A failure to acknowledge that extensive and undue experimentation would be required to learn a method for storing data being extracted from a plurality of databases using the methods identified under error 50, error 51, error 52 and error 53 so that it can be used by a variety of independent applications without a special viewer and without knowing in advance which data are going to be analyzed and/or displayed, and

Error # 55) A failure to acknowledge that extensive and undue experimentation would be required to learn a method for providing a user with the ability to simultaneously and easily complete the methods identified under error 50, error 51, error 52, error 53 and error 54.

The required experimentation would clearly be excessive and undue because the references disclosed to date do not support the development of any of the methods outlined above. Furthermore, the references teach that there would be no motivation to complete this work as XML was going to be replaced by SMIL (Bowman Amuah, Column 42, Lines 5 - 25). All errors affect all rejected claims.

Error 56 – It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements*

"arranged as in the claim" (*Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Missing elements were discussed under Errors 1 through 17. Davis also fails to arrange elements as they are arranged in the claim as Davis relies on combining data from source databases (230) and a separate image database (226) in a RDML viewer (100) or formatter instead of using a single, integrated database to store converted data. Affects all rejected claims.

Errors 57 through 59 – The claim rejections are based on 35 U.S.C. §102(e) which states: *A person shall be entitled to a patent unless the invention was described in - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.* Errors in the rejection of claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, and claim 43 caused by the apparent failure to meet any of the statutory requirements for anticipation rejections include:

Error #57) Failure to acknowledge the fact that the cited document fails to describe any elements of the claimed invention. As detailed in the preceding discussion, the anticipation rejections appear to be based on a non-existent standard for anticipation "mentions some the same words as another document" instead of "describes the invention" as there is not one aspect of the rejected claims that was included in the cited document. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art."* In *re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 42, the Examiner does not appear to have considered any of the limitations.

Error #58) Failure to acknowledge that those signing the relevant Office Actions apparently lack knowledge of the art sufficient to understand the difference between an integrated database and an image database.

Error #59) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited document.

Errors 60 and 61 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the

standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #60) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 59 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the anticipation rejections of claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, and claim 43 and that as a result the rejections fail to meet the substantial evidence standard.

Error #61) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the anticipation rejection of claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, and claim 43 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty and newness of the rejected claims (see errors 1 through 56);
- b) there is no rational connection between the agency fact findings and the statutory requirements for an anticipation rejection (see errors 57 through 59), and
- c) prior agency fact-findings have shown that 35 U.S.C. 102 requirements for novelty are apparently not always considered during the prosecution and allowance of large company patent applications (i.e. Davis, Warshavsky). This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

As detailed above, the Examiner has based the claim rejections under this issue on 61 errors in the facts and the law. When the 61 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 5 is two hundred thirty six (236). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of anticipation cannot be properly established.

Summarizing the preceding discussion, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of anticipation for a single claim. These failures provide additional evidence that the claimed inventions are novel and new.

Issue 6 – Whether claim 44, claim 45, claim 46, claim 47, claim 50, claim 51 and claim 52 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

The claims are patentable because the claim rejections are based on several hundred errors in

the facts and in the law. Because of these errors, the cited document (Davis) and the arguments related to the cited document fail to establish a prima facie case of anticipation for every rejected claim as detailed below.

Errors 1 through 18 – It is well established that: “A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently described in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Errors in the claim rejections caused by the apparent failure of the cited document to expressly or inherently describe elements of a claim include:

Errors #1 through #3) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 44 (also affects claim 45, claim 46, claim 47, claim 50 and claim 51). Elements that are not expressly or inherently described include:

- a) *integrating data from a plurality of systems using xml and a common schema* – the Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDML viewer (#1);
- b) *transforming said data into an integrated database then output said database* – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230) and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format (#2) on demand; and
- c) *where said data is representative of a physical object* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object (#3).

Errors #4 and #5) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 45. Elements that are not expressly or inherently described include:

- a) *a physical object that comprises an organization* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object or organization (#4), and
- b) *a common schema that includes an organization designation* – the Davis document

does not expressly or inherently teach a schema of any kind as it teaches the use of a dtd as mentioned previously (#5).

Errors #6 through #12 Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 46. Elements that are not expressly or inherently described include:

a) *a common schema that includes an organization designation* – the Davis document does not expressly or inherently teach a schema of any kind as it teaches the use of a dtd as mentioned previously (#6).

b) *wherein the designated organization is a single product (#7), a group of products (#8), a division (#9), a company (#10), a multi-company corporation (#11) or a value chain (#12).*

Error #13 Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 47. Elements that are not expressly or inherently described include: a common schema that includes a data dictionary (#13).

Error #14 Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 50. Elements that are not expressly or inherently described include: the integration of data from an external database (#14).

Error #15 Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 51. Elements that are not expressly or inherently described include converting and storing data in accordance with a common schema (#15). See discussion under errors 1 through 3 of this issue.

Errors #16 through #18 Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 52. Elements that are not expressly or inherently described include:

a) *integrating data from a plurality of systems using xml and a common schema* – See discussion under errors 1 through 3 of this issue (#16);

b) *transforming said data into an integrated database and output said database* - See discussion under errors 1 through 3 of this issue (#17); and

c) *where said data is representative of a physical object* – See discussion under errors 1 through 3 of this issue (#18).

Errors 19 through 36 – It is well established that in order to reject a claim based on anticipation: *“The identical invention must be shown in as complete detail as is contained in the .*

claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Errors in the claim rejections caused by the apparent failure of the cited document to use the same level of detail included in a claim include:

Errors #19 through #21 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 44 (also affects claim 45, claim 46, claim 47, claim 50 and claim 51), including:

- a) integrating data from a plurality of systems using xml and a common schema (#19);*
- b) transforming said data into an integrated database (#20); and*
- c) where said data is representative of a physical object (#21).*

Errors #22 and #23 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 45, including:

- a) a physical object that comprises an organization (#22), and*
- b) a common schema that includes an organization designation – the Davis document does not expressly or inherently teach a schema of any kind as it teaches the use of a dtd as mentioned previously (#23).*

Errors #24 through #30 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 46, including:

- a) a common schema that includes an organization designation (#24),*
- b) wherein the designated organization is a single product (#25), a group of products (#26), a division (#27), a company (#28), a multi-company corporation (#29) or a value chain (#30).*

Error #31 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 47, namely a common schema that includes a data dictionary (#31).

Error #32 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 50. Elements that are not expressly or inherently described include the integration of data from an external database (#32).

Error #33 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 51. Elements that are not expressly or inherently described include converting and storing data in accordance with a common schema (#33).

Errors #34 through #36 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 52, including:

- a) *integrating data from a plurality of systems using xml and a common schema (#34);*
- b) *transforming said data into an integrated database (#35); and*
- c) *where said data is representative of a physical object (#36).*

Errors 37 through 43 – It is well established that that: *"in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."* *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In spite of this well known requirement, no explanation was provided. In spite of this well known requirement, the Examiner has failed to provide the technical reasoning required to sustain the rejection of claim 44 (#37), claim 45 (#38), claim 46 (#39), claim 47 (#40), claim 50 (#41), claim 51 (#42) and claim 52 (#43).

Errors 44 through 56 – It is well established that that: *"in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation."* *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1379 (Fed. Cir. 2007)). The methods disclosed in the Davis document do not enable the completion of a single claim. Replicating the functionality of the rejected claims would require the alteration or removal of a number of methods taught by Davis. It would also require the addition of a number of new capabilities not described by Davis. Extensive and undue experimentation would be required to support both steps. Errors in the claim rejections caused by the failure to acknowledge the need for extensive and undue experimentation include errors 43 through 55 identified under Issue 5.

Error 57 – It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements "arranged as in the claim"* (*Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Missing elements were discussed under Errors 1 through 17. Davis also fails to arrange elements as they are arranged in the claim as Davis relies on combining data from source databases (230) and a separate image database (226) in a RDML viewer (100) or formatter instead of using a single, integrated database (50) to store converted data. Affects all rejected claims.

Errors 58 through 60 – The claim rejections are based on 35 U.S.C. §102(e) which states: *A person shall be entitled to a patent unless the invention was described in - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention*

by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language. Errors in the rejection of claim 44, claim 45, claim 46, claim 47, claim 50, claim 51 and claim 52 caused by the apparent failure to meet any of the statutory requirements for anticipation rejections include:

Error #58) Failure to acknowledge the fact that the cited document fails to describe any elements of the claimed invention. As detailed in the preceding discussion, the anticipation rejections appear to be based of a non-existent standard for anticipation “mentions some the same words as another document” instead of “describes the invention” as there is not one aspect of the rejected claims that was included in the cited document. It is also well established that the “*Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.*” *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 43, the Examiner does not appear to have considered any of the limitations.

Error #59) Failure to acknowledge that those signing the relevant Office Actions apparently lack knowledge of the art sufficient to understand the difference between and integrated database and an image database.

Error #60) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited document.

Errors 61 and 62 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #61) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 60 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the anticipation rejections of claim 44, claim 45, claim 46, claim 47, claim 50, claim 51 and claim 52 and that as a result the rejections fail to meet the substantial evidence standard.

Error #62) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the anticipation rejection of claim 44, claim 45, claim 46, claim 47, claim 50, claim 51 and claim 52 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty and newness of the rejected claims (see errors 1 through 57);
- b) there is no rational connection between the agency fact findings and the statutory requirements for an anticipation rejection (see errors 58 through 60), and
- c) prior agency fact-findings have shown that 35 U.S.C. 102 requirements for novelty are apparently not always considered during the prosecution and allowance of large company patent applications (i.e. Davis). This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

As detailed above, the Examiner has based the claim rejections under this issue on 62 errors in the facts and the law. When the 62 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 6 is two hundred six (206). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of anticipation cannot be properly established.

Summarizing the preceding discussion, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of anticipation for a single claim. These failures provide additional evidence that the claimed inventions are novel and new.

Issue 7 – Whether claim 135, claim 136, claim 137 and claim 138 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

The claims are patentable because the claim rejections are based on over a hundred errors in the facts and in the law. Because of these errors, the cited document (Davis) and the arguments related to the cited document fail to establish a prima facie case of anticipation for every rejected claim as detailed below.

Errors 1 through 15 – It is well established that: “A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently described in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Errors in the claim rejections caused by the apparent failure of the cited document to expressly or inherently describe elements of a claim include:

Errors #1 through #4) Failure to acknowledge the fact that Davis does not expressly or

inherently describe elements of claim 135 (also affects claim 136, claim 137 and claim 138).

Elements that are not expressly or inherently described include:

- a) integrating data from a plurality of systems using xml and a common schema* – the Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDML viewer (#1);
- b) transforming said data into an integrated database then output said database* – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230) and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format (#2) on demand;
- c) where said database stores data in accordance with said schema* – Davis does not expressly or inherently teach that data are stored in accordance with a common schema, data are stored in accordance with a dtd by line or document (#3), and
- d) where said data is representative of an organization* – Davis does not expressly or inherently teach that data are limited to data representative of an organization (#4).

Error #5) Failure to acknowledge the fact that Davis does not expressly or inherently describe an element of claim 136, namely, *wherein storing said data in an integrated database for use in processing further comprises using metadata mapping to convert and store data in accordance with a common schema using one or more schema defined categories* (#5).

Errors #6 through #9) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 137. Elements that are not expressly or inherently described include: *a common schema that includes attributes selected from the group consisting of organization designation (#6), data structure (#7), metadata standard (#8), data dictionary (#9) and combinations thereof.*

Errors #10 through #15) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 138. Elements that are not expressly or inherently described include: *a schema wherein the designated organization is a single product* (#10), a

group of products (#11), a division (#12), a company (#13), a multi-company corporation (#14) or a value chain (#15).

Errors 16 through 30 – It is well established that in order to reject a claim based on anticipation: *"The identical invention must be shown in as complete detail as is contained in the . claim."* *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Errors in the claim rejections caused by the apparent failure of the cited document to use the same level of detail included in a claim include:

Errors #16 through #19 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 135 (also affects claim 136, claim 137 and claim 138), including:

- a) integrating data from a plurality of systems using xml and a common schema (#16);*
- b) transforming said data into an integrated database (#17);*
- c) where said database stores data in accordance with said schema (#18); and*
- d) where said data is representative of a physical object (#19).*

Error #20 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 136, namely, *wherein storing said data in an integrated database for use in processing further comprises using metadata mapping to convert and store data in accordance with a common schema using one or more schema defined categories (#20).*

Errors #21 through #24 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 137, including: *a common schema that includes attributes selected from the group consisting of organization designation (#21), data structure (#22), metadata standard (#23), data dictionary (#24) and combinations thereof.*

Errors #25 through #30 Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 138, including: *a schema wherein the designated organization is a single product (#25), a group of products (#26), a division (#27), a company (#28), a multi-company corporation (#29) or a value chain (#30).*

Errors 31 through 34 – It is well established that that: *"in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."* *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In spite of this well known requirement, no explanation was provided. In spite of this well known

requirement, the Examiner has failed to provide the technical reasoning required to sustain the rejection of claim 135 (#31), claim 136 (#32), claim 137 (#33) and claim 138 (#34).

Errors 35 through 47 – It is well established that that: *“in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing In re Omeprazole Patent Litig., 483 F.3d 1364, 1379 (Fed. Cir. 2007)).* The methods disclosed in the Davis document do not enable the completion of a single claim. Replicating the functionality of the rejected claims would require the alteration or removal of a number of methods taught by Davis. It would also require the addition of a number of new capabilities not described by Davis. Extensive and undue experimentation would be required to support both steps. Errors in the claim rejections caused by the failure to acknowledge the need for extensive and undue experimentation include errors 43 through 55 identified under Issue 5.

Error 48 – It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements “arranged as in the claim” (Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983)).* Missing elements were discussed under Errors 1 through 17. Davis also fails to arrange elements as they are arranged in the claim as Davis relies on combining data from source databases (230) and a separate image database (226) in a RDML viewer (100) or formatter instead of using a single, integrated database (50) to store converted data. Affects all rejected claims.

Errors 49 through 51 – The claim rejections are based on 35 U.S.C. §102(e) which states: *A person shall be entitled to a patent unless the invention was described in - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.* Errors in the rejection of claim 135, claim 136, claim 137 and claim 138 caused by the apparent failure to meet any of the statutory requirements for anticipation rejections include:

Error #49) Failure to acknowledge the fact that the cited document fails to describe any

elements of the claimed invention. As detailed in the preceding discussion, the anticipation rejections appear to be based of a non-existent standard for anticipation "mentions some the same words as another document" instead of "describes the invention" as there is not one aspect of the rejected claims that was included in the cited document. It is also well established that the "*Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.*" *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 48, the Examiner does not appear to have considered any of the limitations.

Error #50) Failure to acknowledge that those signing the relevant Office Actions apparently lack a knowledge of the art sufficient to understand the difference between and integrated database and an image database.

Error #51) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited document.

Errors 52 and 53 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #52) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 51 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the anticipation rejections of claim 135, claim 136, claim 137 and claim 138 and that as a result the rejections fail to meet the substantial evidence standard.

Error #53) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the anticipation rejection of claim 135, claim 136, claim 137 and claim 138 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty and newness of the rejected claims (see errors 1 through 48);
- b) there is no rational connection between the agency fact findings and the statutory requirements for an anticipation rejection (see errors 49 through 51), and
- c) prior agency fact-findings have shown that 35 U.S.C. 102 requirements for novelty are

apparently not always considered during the prosecution and allowance of large company patent applications (i.e. Davis, Warshavsky). This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

As detailed above, the Examiner has based the claim rejections under this issue on 53 errors in the facts and the law. When the 53 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 7 is one hundred thirty four (134). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of anticipation cannot be properly established.

Summarizing the preceding discussion, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of anticipation for a single claim. These failures provide additional evidence that the claimed inventions are novel and new.

Issue 8 – Whether claim 141, claim 142, claim 143, claim 145 and claim 149 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

The claims are patentable because the claim rejections are based on over a hundred errors in the facts and in the law. Because of these errors, the cited document (Davis) and the arguments related to the cited document fail to establish a prima facie case of anticipation for every rejected claim as detailed below.

Errors 1 through 11 – It is well established that: “A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently described in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Errors in the claim rejections caused by the apparent failure of the cited document to expressly or inherently describe elements of a claim include:

Errors #1 through #4) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 141 (also affects claim 142 and claim 143). Elements that are not expressly or inherently described include:

a) integrating data from a plurality of systems using xml and a common schema – the Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDMML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDMML viewer (#1);

b) transforming said data into an integrated database then output said database – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of

information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230) and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format (#2) on demand;

c) *where said database stores data in accordance with said schema* – Davis does not expressly or inherently teach that data are stored in accordance with a common schema, data are stored in accordance with a dtd by line or document (#3), and

d) *where said data is representative of a physical object or substance* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object (#4).

Error #5) Failure to acknowledge the fact that Davis does not expressly or inherently describe an element of claim 142, namely, *wherein at least some data are pre-specified for integration* (#5).

Error #6) Failure to acknowledge the fact that Davis does not expressly or inherently describe an element of claim 143, namely, *wherein the schema is statistically valid* (#6).

Errors #7 through #10) Failure to acknowledge the fact that Davis does not expressly or inherently describe elements of claim 145 (also affects claim 149). Elements that are not expressly or inherently described include:

a) *integrating data from a plurality of systems using xml and a common schema* – the Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDML viewer (#7);

b) *transforming said data into an integrated database then output said database* – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230) and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format on demand (#8);

- c) *where said database stores data in accordance with said schema* – Davis does not expressly or inherently teach that data are stored in accordance with a common schema, data are stored in accordance with a dtd by line or document (#9), and
- d) *where said data is representative of a physical object or substance* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object (#10).

Error #11) Failure to acknowledge the fact that Davis does not expressly or inherently describe an element of claim 149, namely, *storing a plurality of converted data in one or more tables to support organization processing* (#11).

Errors 12 through 22 – It is well established that in order to reject a claim based on anticipation: “*The identical invention must be shown in as complete detail as is contained in the . claim.*” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Errors in the claim rejections caused by the apparent failure of the cited document to use the same level of detail included in a claim include:

Errors #12 through #15) Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 141 (also affects claim 142 and claim 143), including:

- a) *integrating data from a plurality of systems using xml and a common schema* (#12);
- b) *transforming said data into an integrated database* (#13);
- c) *where said database stores data in accordance with said schema* (#14); and
- d) *where said data is representative of a physical object* (#15).

Error #16) Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 142, namely, *wherein at least some data are pre-specified for integration* (#16).

Error #17) Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 143, namely, *wherein the schema is statistically valid* (#17).

Errors #18 through #21) Failure to acknowledge the fact that Davis does not use the same level of detail to describe elements of claim 145 (also affects claim 149), including:

- a) *integrating data from a plurality of systems using xml and a common schema* (#18);
- b) *transforming said data into an integrated database* (#19);
- c) *where said database stores data in accordance with said schema* (#20); and
- d) *where said data is representative of a physical object* (#21).

Error #22 Failure to acknowledge the fact that Davis does not use the same level of detail to describe an element of claim 149, namely, *storing a plurality of converted data in one or more tables to support organization processing* (#22).

Errors 23 through 26 – It is well established that that: *“in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”* *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In spite of this well known requirement, no explanation was provided. In spite of this well known requirement, the Examiner has failed to provide the technical reasoning required to sustain the rejection of claim 141 (#23), claim 142 (#24), claim 143 (#25), 144 (#25) and claim 149 (#26).

Errors 27 through 39 – It is well established that that: *“in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation.* *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1379 (Fed. Cir. 2007)). The methods disclosed in the Davis document do not enable the completion of a single claim. Replicating the functionality of the rejected claims would require the alteration or removal of a number of methods taught by Davis. It would also require the addition of a number of new capabilities not described by Davis. Extensive and undue experimentation would be required to support both steps. Errors in the claim rejections caused by the failure to acknowledge the need for extensive and undue experimentation include errors 43 through 55 identified under Issue 5.

Error 40 – It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements “arranged as in the claim”* (*Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Missing elements were discussed under Errors 1 through 17. Davis also fails to arrange elements as they are arranged in the claim as Davis relies on combining data from source databases (230) and a separate image database (226) in a RDML viewer (100) or formatter instead of using a single, integrated database (50) to store converted data. Affects all rejected claims.

Errors 41 through 43 – The claim rejections are based on 35 U.S.C. §102(e) which states: *A person shall be entitled to a patent unless the invention was described in - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in*

the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language. Errors in the rejection of claim 141, claim 142, claim 143, claim 145 and claim 149 caused by the apparent failure to meet any of the statutory requirements for anticipation rejections include:

Error #41) Failure to acknowledge the fact that the cited document fails to describe any elements of the claimed invention. As detailed in the preceding discussion, the anticipation rejections appear to be based of a non-existent standard for anticipation "mentions some the same words as another document" instead of "describes the invention" as there is not one aspect of the rejected claims that was included in the cited document. It is also well established that the "*Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.*" *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 40, the Examiner does not appear to have considered any of the limitations.

Error #42) Failure to acknowledge that those signing the relevant Office Actions apparently lack a knowledge of the art sufficient to understand the difference between and integrated database and an image database.

Error #43) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited document.

Errors 44 and 45 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #44) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 43 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the anticipation rejections of claim 141, claim 142, claim 143, claim 145 and claim 149 and that as a result the rejections fail to meet the substantial evidence standard.

Error #45) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the anticipation rejection of claim 141, claim 142, claim 143, claim 145 and claim 149 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty and newness of the rejected claims (see errors 1 through 40);
- b) there is no rational connection between the agency fact findings and the statutory requirements for an anticipation rejection (see errors 41 through 43), and
- c) prior agency fact-findings have shown that 35 U.S.C. 102 requirements for novelty are apparently not always considered during the prosecution and allowance of large company patent applications (i.e. Davis, Warshavsky). This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

As detailed above, the Examiner has based the claim rejections under this issue on 45 errors in the facts and the law. When the 45 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 8 is one hundred forty five (145). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of anticipation cannot be properly established.

Summarizing the preceding discussion, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of anticipation for a single claim. These failures provide additional evidence that the claimed inventions are novel and new.

Issue 9 – Whether claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are enabled under 35 U.S.C. §112, first paragraph?

The claims are patentable because the claim rejections are based on over a hundred errors in the facts and in the law. Because of these errors, the arguments presented by the Examiner fail to establish a prima facie case of a lack of enablement for every rejected claim as detailed below.

Errors 1 through 4 – It is well established that “a description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of

presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should: (A) Identify the claim limitation at issue; and (B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description." Furthermore, it is well established that "the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). This has been the primary test of enablement since 1916 (see Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916)). The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination (In re Wands, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988)). Factors which need to be considered include: the nature of the invention, the state of the prior art, the predictability or lack thereof in the art, the amount of direction or guidance present, the presence or absence of working examples, the breadth of the claims, the relative skill of those in the art and the quantity of experimentation needed (hereinafter referred to as the Wands factors). A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors (the Wands factors), the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation (In re Wright, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)). Errors in the claim rejections regarding an alleged lack of enablement include:

Error #1 – Is a failure to acknowledge that no evidence has been presented to support the rejection of any claims for a lack of enablement. As noted above, rejection under §112 first paragraph requires a preponderance of evidence and express findings of fact. In spite of this well known requirement, no facts have been identified and no evidence has been presented that excessive experimentation would be required and/or that the full scope of the claimed invention has not been described. In place of the required evidence, the Examiner has made conclusory statements that three phrases "an integrated database", "a physical object or substance" and "output said database" are allegedly not described in the specification.

Affects claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164.

Error #2) Is a failure to acknowledge that the conclusory statement about "an integrated database" is incorrect. The specification describes a process for developing an application database for an enterprise. The application database is an integrated database (see Evidence Appendix, pages 100 - 109). It is well established that *"the enablement requirement is met if the description enables any mode of making and using the claimed invention"* (see *Invitrogen Corp. v. Clontech Labs, Inc.*, 429 F.3d 1052, 1058 (Fed. Cir. 2005) where the Court referenced *Engel Industries, Inc. v. Lockformer Co.* 946 F.2d 1528 (Fed. Cir. 1991)). The Examiner has not presented any evidence that the procedure outlined in the specification cannot be used to develop integrated databases. Furthermore, the specification as filed contained a claim under § 1.78 for the benefit of U.S. Patent 5,615,109 which describes the development of an integrated database (a fact that the U.S.P.T.O. has acknowledged). Affects claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164.

Error #3) Is a failure to acknowledge that the conclusory statement about "a physical object or substance" is incorrect. The specification describes a process for developing an application database for an enterprise. An enterprise is a physical object. Furthermore, the Examiner has not identified any reason why the procedure used for developing an enterprise database cannot be used for any other physical object. Affects claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164.

Error #4) Is a failure to acknowledge that the conclusory statement about "outputting a database" is incorrect. As is well known in the art of data processing, outputting something (a report, a value or a database) makes it available for use. The specification describes a process for developing an application database for an enterprise and making it available for use. The integrated, application database is also the output of the process (see Evidence Appendix, pages 100 - 109). Affects claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164.

Error #5) - Is a failure to acknowledge that the Wands factors have not been considered. As noted above, rejection under §112 first paragraph requires a consideration of the Wands factors. In spite of this well known requirement, the Examiner has not completed a single aspect of the required Wands factor analysis.

Error #6) Is an apparent failure to consider the evidence that has been presented. Evidence that the Examiner has apparently ignored includes: a) the summary of claimed subject matter and b) a declarations submitted in support of this application, the declarations represent the only known independent review of the patent specification by someone with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. Although the expert providing the declaration has considerable expertise in the data management, the Examiner has apparently chosen to ignore the contents of this declaration which completely rebuts the basis for the claim rejections (see Evidence Appendix, pages 100 – 109). Affects all claims.

Since the prima facie case to support the claim rejections has not been established, no rebuttal was (or is) required.

Error 7 - Is a failure to acknowledge that “*there is no requirement that the words in the claim must match those used in the specification disclosure,*” and that the use of words in a claim that do not match those used in the specification does not comprise the incorporation of new matter (see *In re Robert Skvorecz, CAFC 2008-1221*). This is particularly true when the term describes one of a plurality of modes for utilizing an invention described in the specification as it is well established that “*the enablement requirement is met if the description enables any mode of making and using the claimed invention*” (see *Invitrogen Corp. v. Clontech Labs, Inc.*, 429 F.3d 1052, 1058 (Fed. Cir. 2005) where the Court referenced *Engel Industries, Inc. v. Lockformer Co.* 946 F.2d 1528 (Fed. Cir. 1991). Affects all claims.

Errors 8 through 10 – The claim rejections are based on 35 U.S.C. §112 first paragraph which states: *The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for an enablement rejection include:

Error #8) Failure to acknowledge the fact that the specification meets the requirements of 35 U.S.C. §112 first paragraph. As illustrated by the preceding discussion of errors 1 through 7, the enablement rejection appears to be based of a non-existent standard for written description enablement. Affects all claims.

Error #9) Failure to acknowledge the fact that the claim rejections have been authored by individuals who appear to lack the level of skill in the art required to author such rejections. It

is well established that the “*hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art*” *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Davis or Srivastava as a reference in support of a rejection for the claimed inventions for the reasons described previously. Another indication of the Examiner’s apparent lack of understanding of the scientific and engineering principles applicable to the pertinent art can be found in the two thousand plus (2,000+) errors identified in the claim rejections in the instant Appeal Brief. Affects all claims.

Error #10) – Is a failure to acknowledge that the claim rejections for an alleged lack of enablement are non statutory. The instant application incorporated a patent by reference that described an integrated database (see related appeal for 10/166,758 for confirmation). If any deficiencies in the written description were actually identified, the proper response in accordance with 37 CFR 1.57 would be to note that material from the cross referenced patent shall be considered incorporated by reference as to the inadvertently omitted portion of the specification or drawing(s) instead of issuing an arbitrary and capricious rejection for a lack of enablement. Please see MPEP 608.01(p) and MPEP 2163.07(b) for details re: U.S.P.T.O. policy in this regard. Affects all claims.

Errors 11 through 12 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #11) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 10 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the lack of enablement rejections of claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 and that as a result the rejections fail to meet the substantial evidence standard.

Error #12) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the enablement rejection of

claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above under errors 1 through 7, there is no evidence to support the rejection of a single claim;
- b) there is no rational connection between the statutory requirements for enablement, the agency fact findings and the rejection of the claims (see errors 8 through 10),
- c) there is no rational connection between the agency's prior fact findings that have found that U.S. Patent 5,615,109 and U.S. Patent Application 10/166,758 both describe inventions for creating integrated databases and the rejection of the claims in the instant application for allegedly introducing new matter by incorporating the term "integrated database" and/or not describing an integrated database (see related appeal for U.S. Patent Application 10/166,758 for details),
- d) there is no rational connection between the claim rejections under this Issue and the prior agency fact findings regarding Warshavsky, and
- e) prior agency fact-findings have shown that 35 U.S.C. 112 first paragraph requirements for enablement are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

As detailed above, the Examiner has based the claim rejections under this issue on 12 errors in the facts and the law. When the 12 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 9 is one hundred thirty two (132). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of anticipation cannot be properly established.

Summarizing the preceding discussion, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of a lack of enablement for a single claim.

Issue 10 – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are indefinite under 35 U.S.C. §112, second paragraph?

The claims are patentable because the claim rejections are based several hundred errors in the facts and in the law. Because of these errors, the arguments presented by the Examiner fail to establish a prima facie case of claim indefiniteness for every rejected claim as detailed below.

Errors 1 through 5 – It is well established that: *the definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001).* Errors in the claim rejections caused by the apparent failure to establish a prima facie case of claim indefiniteness include:

Error #1) – Is a failure to acknowledge that no evidence has been provided to indicate that the rejected claims do not *particularly point out or distinctly claim the disclosed invention to someone of average skill in the art.* In particular, all the claim rejections are based on conclusory statements. Affects all claims

Error #2) – Is a failure to acknowledge that “*there is no requirement that the words in the claim must match those used in the specification disclosure*” and that the use of words in a claim that do not match those used in the specification does not comprise the incorporation of new matter (*see In re Robert Skvorecz, CAFC 2008-1221*). Affects all claims.

Error #3) – Is a failure to acknowledge that virtually all of the terms used in the rejected claims have well recognized meanings which allows the reader to infer the meaning of the entire claim with reasonable confidence (*see Bancorp Services, L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004)*). Affects all claims.

Error #4) – Is a failure to acknowledge that the rejected claims do not contain any terms that do not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable (*Halliburton Energy Services, Inc. v. M-I LLC, 514 F.3d 1244, 1255, 85 USPQ2d 1663 (Fed. Cir. 2008)* and *Halliburton, 514 F.3d at 1246, 85 USPQ2d at 1658 (Citing Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir. 2007).* In particular:

- a) the conclusory statement about "an integrated database" is incorrect. The specification describes a process for developing an application database for an enterprise that comprises an integrated database (see Evidence Appendix, pages 100 through 109). Furthermore, the specification as filed contained a claim under § 1.78 for the benefit of U.S. Patent 5,615,109 which also describes the development of an integrated database.
- b) the conclusory statement about "a physical object or substance" is incorrect. The specification describes a process for developing an integrated, application database for an enterprise. An enterprise is a physical object.
- c) the conclusory statement about "outputting a database" is incorrect. As is well known in the art of data processing, outputting something (a report, a value or a database) makes it available for use. The specification describes a process for developing an application database for an enterprise and making it available for use (see Evidence Appendix, pages 100 – 109). Furthermore, the specification as filed contained a claim under § 1.78 for the benefit of U.S. Patent 5,615,109 which also describes developing an integrated database and making it available for use.
- d) the conclusory statement about the term "as required" is incorrect. As described in the specification, the exact steps required to transform data from different sources into an integrated database will vary depending upon the exact status of the data in the source databases.

By providing a clear, well documented process that highlights the relevant principles, the specification provides an objective standard for determining the scope of the claimed invention (see *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1356. (Fed. Cir. 2005)). Evidence to support these assertions can be found in declarations included in the Evidence Appendix. The declarations represent the only known independent review of the instant patent specification and claims by an individual with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. It completely rebuts the Examiner's contentions regarding the claims (see Evidence Appendix, pages 100 – 109). Affects all claims.

Error #5) – Is a failure to acknowledge that the Examiner has failed to establish a prima facie case of indefiniteness by failing to consider the rejected claims as a whole. The claim rejections all rely on conclusory statements regarding a portion of a claim. The complete claims provide additional context that helps define the metes and bounds of the claimed invention. Affects all claims.

Errors 6 through 8 – The claim rejections are based on 35 U.S.C. §112 second paragraph

which states: *The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for an indefinite claim rejection include:

Error #6) Failure to acknowledge the fact that the rejected claims meet the requirements of 35 U.S.C. §112 second paragraph. As illustrated by the preceding discussion of errors 1 through 5, the indefinite claim rejections appear to be based on an unknown and non-existent standard for claim definiteness. Affects all claims.

Error #7) Failure to acknowledge the fact that the claim rejections have been authored and/or approved by individuals who does not appear to have the level of skill in the art required to author valid claim rejections. It is well established that: *the definiteness of claim language must be analyzed, not in a vacuum, but in light of ... The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.* It is also well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art"* *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Davis and/or Srivastava references in support of the rejection for the claimed inventions for the reasons described previously. Another indication of the apparent lack of understanding of the scientific and engineering principles can be found in the two thousand plus (2,000+) errors identified in the claim rejections in the instant Appeal Brief. Affects all claims.

Error #8) – Is a failure to acknowledge that the alleged indefiniteness of the claims may be a product of the Examiner's apparent lack of understanding of the relevant rules and statutes. The instant application as filed incorporated a number of applications by reference. In accordance with 37 CFR 1.57, the proper response to the identification of an allegedly unsupported claim limitation would be to first require that pertinent material from the cross referenced patent applications be added to the specification instead of issuing an arbitrary and capricious rejection for indefiniteness. In accordance with 37 CFR 1.57 any such material (if identified) would be automatically be considered incorporated by reference. Affects all claims.

Errors 9 and 10 – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the

standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #9) A failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 8 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the rejections for indefiniteness for claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 and that as a result the rejections fail to meet the substantial evidence standard.

Error #10) Failure to acknowledge the fact that all the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the rejection of all claims for indefiniteness also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed under errors 1 through 5, there is no evidence that the claims are indefinite;
- b) as detailed under errors 6 through 8 there is no rational connection between the statutory requirements for claim definiteness, the agency fact findings and the rejection of the claims,
- c) there is no rational connection between the rejection for claim indefiniteness and the prior agency fact findings associated with U.S. Patent Application 10/166,758, and
- d) prior agency fact-findings have shown that 35 U.S.C. 112 requirements for written description are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an arbitrary and capricious violation of 35 USC 3.

As detailed above, the Examiner has based the claim rejections under this issue on ten errors in the facts and the law. When the ten (10) errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 10 is six hundred (600). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of anticipation cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case that a single claim is indefinite.

8. Conclusion

The Appellant notes that with respect to the prosecution of the instant application, it appears that the U.S.P.T.O. has not fully complied with the requirements set forth in the APA, 35 U.S.C. 3 and 35 U.S.C. 131. A valid patent application rejection requires substantial evidence (Gartside, 203 F.3d at 1312). As described in the preceding section, the March 6, 2009 Office Action does not contain any evidence that would support the rejection of a single claim. However, related appeals and the March 6, 2009 Office Action for the instant application do provide substantial evidence that: those authoring/signing the instant Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art, those authoring the Office Action do not adhere to any of the well established statutory requirements for authoring valid claim rejections, and that those authoring the Office Action appear to have based the claim rejections on the use legal standards that are not applied during the review and allowance of similar applications filed by larger companies.

For the reasons detailed above, the Appellant respectfully but forcefully contends that each claim is patentable. Therefore, reversal of all rejections is courteously solicited.

Respectfully submitted,
Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President
Dated: December 27, 2009

9. Claims Appendix

34. A computer readable medium having sequences of instructions stored therein, which when executed cause the processor in a computer to perform a data preparation method, comprising: integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database and output said database where said data is representative of a physical object.

35. The computer readable medium of claim 34 where the physical object comprises an organization and the common schema includes an organization designation.

36. The computer readable medium of claim 35 wherein the designated organization is a single product, a group of products, a division, a company, a multi-company corporation or a value chain.

37. The computer readable medium of claim 34 where the common schema is statistically valid and includes a data structure.

38. The computer readable medium of claim 37 where the data structure is a hierarchy.

39. The computer readable medium of claim 34 where the common schema includes a data dictionary.

40. The computer readable medium of claim 39 where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.

41. The computer readable medium of claim 34 where data are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.

42. The computer readable medium of claim 34 wherein at least a portion of the data are from

the Internet or an external database.

43. The computer readable medium of claim 34 where the data preparation method further comprises converting data to match a common schema and storing the converted data in a central database.

44. A computer implemented data preparation method, comprising: integrating data representative of a physical object or substance from a plurality of systems using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database.

45. The method of claim 44 where the physical object or substance comprises an organization and the common schema includes an organization designation and data structure.

46. The method of claim 45 wherein the designated organization is a single product, a group of products, a division, a company, a multi-company corporation or a value chain.

47. The method of claim 44 where the common schema includes a data dictionary.

48. The method of claim 47 where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.

49. The method of claim 44 where data are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems and purchasing systems.

50. The method of claim 44 wherein at least a portion of the data are from the Internet or external databases.

51. The method of claim 44 where the data preparation method further comprises converting and storing data in accordance with a common schema.

52. A computer readable medium having sequences of instructions stored therein, which when executed cause the processors in a plurality of computers connected via a network to perform the data preparation method of claim 44.

62. A computer readable medium having sequences of instructions stored therein, which when executed cause the processors in a plurality of computers that have been connected via a network to perform an organization management method, comprising:

transforming data representative of an organization from a plurality of systems into an integrated database that stores data in accordance with an xml metadata standard and a common schema, and

using at least a portion of said data to create and output one or more tools for organization management

where the one or more tools for organization management further comprise a system for automated trading of an organization equity security based on a calculated market sentiment value and one or more tools selected from the group consisting of analytical models, category of value models, component of value models, market value models, network models, optimization models, simulation models, value chain models, management reports, lists of changes that will optimize one or more aspects of organization financial performance and combinations thereof.

63. The computer readable medium of claim 62 where the one or more tools are made available for review using an electronic display, a paper document or combinations thereof.

64. The computer readable medium of claim 62 where data are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), quality control systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems,

purchasing systems, web site systems, the Internet, external databases, user input and combinations thereof.

68. The computer readable medium of claim 62, where the common schema defines common attributes selected from the group consisting of data structure, organization designation, data dictionary and combinations thereof.

69. The computer readable medium of claim 68 where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, organization designations, time periods and units of measure.

70. The computer readable medium of claim 68 where the data structure is a hierarchy.

90. The computer readable medium of claim 62, wherein the one or more aspects of organization financial performance are selected from the group consisting of organization revenue, organization expense, organization capital change, organization current operation value, organization real option value, organization market sentiment value, organization market value and combinations thereof.

91. The computer readable medium of claim 62, wherein the identified changes are changes to alliance value drivers, brand value drivers, channel value drivers, customer value drivers, customer relationship value drivers, employee value drivers, equipment value drivers, intellectual property value drivers, partnership value drivers, process value drivers, production equipment value drivers, vendor value drivers, vendor relationship value drivers, organization equity and combinations thereof.

134. The computer readable medium of claim 62 that learns the relative importance of the different elements of value, categories of value and enterprises in determining organization financial performance as required to support the development of one or more tools for organization management.

135. A data preparation system, comprising:

a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to:

integrate a plurality of data representative of an organization that physically exists from a plurality of organization related systems and an Internet using xml and a common schema

as required to transform said data into an integrated database that stores data in accordance with said schema and output said database.

136. The system of claim 135, wherein storing said data in an integrated database for use in processing further comprises using metadata mapping to convert and store data in accordance with a common schema using one or more schema defined categories.

137. The system of claim 135, wherein a common schema includes attributes selected from the group consisting of organization designation, data structure, metadata standard, data dictionary and combinations thereof.

138. The system of claim 137, wherein an organization designation further comprises a single product, a group of products, a division, a company, a multi-company corporation or a value chain.

139. The system of claim 137, wherein a common schema further comprises a data dictionary where the data dictionary defines standard data attributes selected from the group consisting of account numbers, components of value, currencies, elements of value, units of measure, time periods and combinations thereof.

140. The system of claim 135, wherein a plurality of organization related systems are database management systems for systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.

141. A program storage device readable by machine, tangibly embodying a program of instructions executable by a machine to perform the method steps in a data processing method, comprising:

use metadata mapping to integrate a plurality of data representative of a physical object or substance from a plurality of systems in accordance with xml and a common schema to transform said data into an integrated database that stores data in accordance with said schema and output said database

where metadata mapping is guided by a metadata mapping table.

142. The program storage device of claim 141, wherein at least some data are pre-specified for integration.

143. The program storage device of claim 141, wherein the schema is statistically valid.

144. The program storage device of claim 141, wherein a set of integration and conversion rules are established using a metadata and conversion rules window and saved in a metadata mapping table.

145. A computer implemented data method, comprising using metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database
where metadata mapping is guided by a metadata mapping table.

146. The method of claim 145, wherein a plurality of systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems, risk management systems, the Internet and combinations thereof.

147. The method of claim 145, wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.

148. The method of claim 145, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

149. The method of claim 145, wherein a data method further comprises storing a plurality of converted data in one or more tables to support organization processing.

150. A data preparation system, comprising:

a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to:

use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database

where metadata mapping is guided by a metadata mapping table, and

where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof.

151. The system of claim 150, wherein at least some data are pre-specified for integration and conversion.

152. The system of claim 150, wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.

153. The system of claim 150, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

154. The system of claim 150, wherein at least a portion of the data are obtained from an Internet or an external database.

155. A program storage device readable by machine, tangibly embodying a program of instructions executable by a machine to perform the method steps in a data processing method, comprising:

use metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database where metadata mapping is guided by a metadata mapping table, and where a metadata and conversion rules window is used to establish a metadata mapping table.

156. The program storage device of claim 155, wherein at least some data are pre-specified for integration and conversion

157. The program storage device of claim 155, wherein a plurality of integrated enterprise data are stored in an application database in accordance with a common schema.

158. The program storage device of claim 155, wherein a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems, risk management systems, the Internet and combinations thereof.

159. A computer implemented data method, comprising using metadata mapping to integrate a plurality of data representative of an enterprise that physically exists from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database where metadata mapping is guided by a metadata mapping table and where a metadata and conversion rules window is used to establish a metadata mapping table.

160. The method of claim 159, wherein a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management

systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems, risk management systems, the Internet and combinations thereof.

161. The method of claim 159, wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.

162. The method of claim 159, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

163. The method of claim 159, wherein a data method further comprises storing a plurality of converted data in one or more tables to support organization processing.

164. A data preparation system, comprising:

a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to:

use metadata mapping to integrate and convert a plurality of data representative of an enterprise that physically exists from a plurality of enterprise related systems in accordance with xml and a common schema to transform said data into an integrated database and output said database

where metadata mapping is guided by a metadata mapping table,

where a metadata and conversion rules window is used to establish a metadata mapping table, and

where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable

systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof.

165. The system of claim 164, wherein at least some data are pre-specified for integration and conversion.

166. The system of claim 164, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

167. The system of claim 164, wherein at least a portion of the data are obtained from an Internet or an external database.

10. Evidence Appendix

Page 99	excerpt from Halford reference received July 25, 2009
Pages 100 - 105	declaration under Rule 132 for 09/940,450 received October 31, 2008
Pages 106 - 109	declaration under Rule 132 for 09/764,068 received May 4, 2009
Pages 110 - 113	declaration under Rule 132 for 10/743,616 received October 17, 2008
Pages 114 - 115	declaration under Rule 132 for 10/287,586 received October 17, 2008
Pages 116 – 117	Zweig reference received July 25, 2009

Summary

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Chunk capacity and chunk size limits

Links between working memory and reasoning

Complexity in reasoning

Method for Analysis of Relational Complexity (MARC)

Summary

References

Working memory and reasoning

Developments in both theory and methodology have strengthened the links between WM and reasoning and some salient points are summarised in Box 1. We propose that the essential link between WM and reasoning is in the common requirement to bind elements to a coordinate system. Consider first short-term serial recall of the words, "Fido, Rover, Cleo". The words are assigned to ordinal positions when presented (Figure 1A), but this assignment must be maintained for later recall, and this requires attention. Even in free recall (not shown), items on a trial must be bound to the present-trial concept or node in memory; binding may be even more extensive inasmuch as an associative network between items would greatly aid in recall. Now consider a choice reaction time task where participants press a different button in response to one of several lights, and the buttons are assigned to lights randomly (non-compatible mappings, Figure 1B). Maintaining bindings of button positions to light positions in WM requires attention [1]. Finally, consider a transitive inference problem such as "Jane is taller than Wendy, Amelia is taller than Jane".

Box 1. Capacity effects in working memory (WM) and reasoning

- The core of WM is the temporary binding of elements to a coordinate system [5, 6] which is closely related to relational representations used in reasoning [4, 1]. Temporary binding to structural representations possibly accounts for the strong relationship between WM capacity and reasoning and fluid intelligence (Gf) [1].
- Capacity limits in both WM and reasoning can be attributed to the number of bindings to slots in a coordinate system or relation. WM is limited to approximately four items that can be kept active [7], while representations in reasoning are limited to four interrelated variables [8].
- Latent variable constructs of WM capacity account for approximately .60 of the variance in reasoning and Gf [2].
- WM has a domain-general component that is critical to its prediction of reasoning and Gf [2].
- New assessments of WM capacity measure how many elements fit in the focus of attention [3] or capacity-limited region [9] more explicitly than traditional sentence and operation spans. These include: Computer-paced reading of numbers, or performing simple operations of +1 or -1, while retaining words or letters for later recall [10]; or presentations too rapid and unpredictable to allow rehearsal [3].



Figure 1
Binding of elements into coordinate systems in (A) working memory (B) choice reaction time, and (C) reasoning.

This can be solved by mapping premise elements into an ordering schema as shown in Figure 1C.

Maintaining bindings between elements and slots using attention is common to WM and to reasoning. This is not the only common factor, but there is substantial evidence that working memory capacity (WMC) accounts for a sizeable proportion of the variance in reasoning [1, 2] and intelligence [3]. WM and reasoning differ in whether the binding is supplied with the input (as in short-term serial recall) or has to be constructed by the reasoner, as in syllogistic (including transitive) inference, where premise elements have to be mapped to slots in a mental model in a way

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 09/940,450

Applicant: Jeff S. Eder

Filed: August 29, 2001

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 23

Customer No: 53787

DECLARATION UNDER RULE 132

I, Gregory M. Cusanza, do hereby declare and say: my home address is 8604 233rd Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. I joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On March 24, 2008, I was given a copy of U.S. Patent Application 10/645,099 filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application although I had previously read U.S. Patent Application 10/441,385 which is similar. U.S. Patent Application 09/940,450 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Davis describes a method and system that copies data from a data source into an RDML document (102). All RDML documents (102) created by the Davis invention use a common xml 1.0 compliant data type definition (hereinafter, dtd) that is described in FIG. 9 and in column 21, line 25 through column 30, line 8 of the specification. The data in an RDML document (102) can be manipulated and formatted by a combined data viewer/analytical program/platform, the RDML data viewer (100), for different "views" (108, Column 9, lines 1 – 36, Column 16, lines 1 – 3). The different "views" (108) supported by the RDML data viewer (100) include charts (716); a tree view (718); spreadsheets (720); footnote display (722); documentation, reports, applications and/or export in a file as shown in FIG. 1 and FIG. 3.

RDML documents (102) are first created from existing data sources (230) using the RDML formatter (216). The RDML formatter (216) is limited to creating RDML documents from a single table or flat file (column 17, lines 51 – 53). If the data being provided is not in a single table or flat file, then a single table needs to be created using a query or some other technique before an RDML document can be created. The RDML formatter 216 is an application that assists a user in selecting the proper documentation tags, saves the tags in a separate database (the RDML image database 226), and creates the actual RDML document (102, column 18, lines 2 – 6). As part of this processing "the formatter 216 inserts a table 504 that holds information regarding the data tables into the data source database 230 for later reference.... The RDML image database 226 contains documentation that relates to a separate

set of data records in the existing database 230.....The image database 226 contains a list of RDML documents 102 that it can produce. The original data may be in flat files, relational tables, or a table that results from a query on a relational database (line 3, column 18 through line 58, column 18). The RDML data viewer (100) has the ability combine documents from different sources (column 28, line 33).

RDML documents (102), created by the formatter (216) may be served from disk based text files (column 18, lines 18 and 19) or they may be created dynamically using the RDML data server (218). The RDML data server (218) sits between the data source (230) and the RDML data viewer (100). In response to a request for an RDML document (102) from the data viewer, the RDML data server (218) queries the data source (230) to retrieve the required information. The retrieved information is then combined with the document definition from the image database (226) to create an RDML document that is transmitted to the RDML data viewer.

The data from the RDML documents (102) that are being used in a view (108) are managed by the RDML data viewer (100) in a number of unique ways as shown in FIG. 7A and as discussed below:

1. the basic unit for the manipulation, storage and display of data is an "RDML line item" (1304, see Column 9, line 25), an RDML line item (1304) is similar to a row in a relational database;
2. the primary data store (712) stores RDML doc objects (1302) and RDML line items (1304) as shown in FIG. 13.
 - a) An RDML doc object (1302) is a full internal representation of the RDML document (102). It contains as its central attribute the tree-structured data elements contained in the document's original tags and implements the DOM interface (Column 34, lines 43 – 47).
 - b) Similar to the RDML doc objects (1302), the RDML line items (1304) are objects that provide high-level methods for retrieving data on a line item, any associated links or notes, and the attributes.
 - c) The views (108) of the RDML data viewer (100) work with RDML docs (1302) and RDML line items (1304) in the primary data store (712) to create their presentations. (Column 35, lines 63 through 65).

Srivastava describes a method and system for extracting metadata from media files, summarizing the extracted metadata in a standardized format such as XML and mapping the

summaries to a selected database schema. The mappings are then used to guide the upload of the summaries and the media files into a database. The database mapper 123 maps the elements of the XML "documents" which contain the logical annotation metadata into the corresponding schema used by the database for storing, indexing, searching and managing the media and its metadata. The physical properties captured in a logical annotation are mapped into the fields of a database object. In addition, the XML representation, which includes content attributes obtained by the content processor 115, may also be stored within the database object. In addition to allowing the media source file to be stored with the metadata, a pointer to (the URL of) the media resource may be stored instead when it does not make sense for the whole media source to be stored. As a result, a self-contained repository, for the media data and its description, is created in the database. This repository can now be indexed with conventional indexing techniques, enabling advanced searches on the multimedia data (Column 8, line 36 – 53).

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that U.S. Patent 6,549,922 (hereinafter, Srivastava) and U.S. Patent 7,249,328 (hereinafter, Davis or the Davis invention) are relevant to the data integration invention described in patent application 09/940,450 only to the extent that they provide additional evidence of novelty of the claimed invention. There are several reasons for this:

1. Patent application 09/940,450 describes a method and system for integrating data from a plurality of systems using xml and a common schema. The Davis invention teaches away from this approach by teaching method and system for copying a table from a single system to an an xml 1.0 compliant dtl.
2. Patent application 09/940,450 describes a method and system for creating an integrated database to support organization processing. The Davis invention teaches away from this approach by teaching method and system for creating documents that can only be viewed and manipulated by a special application – a combined data viewer and analysis program – the RDML data viewer.
3. Patent application 09/940,450 describes a method and system for creating an integrated database using xml and a common schema to support organization processing. The Davis invention teaches away from this approach by teaching the separate storage of data and the

information needed to convert said data to a common format. In particular, the Davis invention teaches method that leaves the original data in the source database and stores the information that defines the conversion to a format that adheres to a common xml 1.0 compliant dtd in a separate database, the RDML image database.

4. Patent application 09/940,450 describes a method and system for creating an integrated database using data from a plurality of systems in accordance with xml and a common schema. The Davis invention teaches away from this approach by teaching a method and system for copying a table from a single system to an RDML document (102) that uses an xml 1.0 compliant dtd. The RDML data viewer (100) has the ability to combine RDML documents that use data from different systems using a user defined view (108) for manipulation and output. However, the Davis specification does not teach or suggest creating an integrated database from the combined data.

5. Patent application 09/940,450 describes a method and system for creating an integrated database that utilizes a common schema for data storage to support organization processing. The Davis invention teaches away from this approach by teaching a method and system for storing data by "RDML document" and "RDML line item" that is optimized for making presentations and creating graphs.

6. Patent application 09/940,450 describes a method and system for creating an integrated database with data from a plurality of systems. Combining items 4 and 5, the Davis invention teaches copying a table from a single system to an RDML document and storing the data by "RDML line item". Given these features, any output file produced by the Davis system would require additional processing to enable data storage at the cell level (for example an individual month within a time series) in accordance with a common schema – additional processing that is not taught or suggested by the Davis invention specification. Data storage at the cell level enables processing of the data by applications other than the RDML data viewer.

7. Patent application 09/940,450 describes a method and system for creating an integrated database and manipulating the data in the integrated database using separate applications. The Davis invention teaches away from this approach by using an RDML data viewer (100) to both combine and manipulate RDML documents.

8. Patent application 09/940,450 describes a method and system for using metadata mapping to integrate data from a plurality of systems in accordance with xml and a common schema.

The Davis invention teaches away from this approach by teaching the use of an RDML formatter 216 that assists a user in selecting the proper documentation tags without using metadata mapping.

9. Patent application 09/940,450 describes a method and system for mapping conversions for database metadata from a plurality of sources to a central database metadata with a metadata and conversion rules window. Srivastava teaches away from this approach by teaching the mapping of extracted and summarized media metadata to a schema followed by the subsequent storage of the media and summarized metadata in the database. Srivastava uses the metadata summary as annotations to enable search for media files, application 09/940,450 uses metadata mapping to guide the conversion of data from one metadata standard to another as part of the process of creating an integrated database.

10. As discussed in items 1 through 9, Davis and Srivastava teach away from almost every aspect of the data integration invention described in application 09/940,450. Given these facts, it is unsurprising that a combination of the teachings of the two patents does not render any aspect of the invention described in application 09/940,450 obvious.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,



10-30-2008

Gregory M. Cusanza

Date: October 30, 2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 09/764,068

Applicant: Jeff S. Eder

Filed: January 19, 2001

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 19

Customer No: 53787

DECLARATION UNDER RULE 132

I, Gregory Cusanza, do hereby declare and say: my home address is 8604 233rd Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. I joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On August 30, 2007, I was given a copy of U.S. Patent Application 10/441,385 filed in the United States Patent Office on May 20, 2003. U.S. Patent Application 09/764,068 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that:

1. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database and the database can properly be called an integrated database;
2. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database. It would be obvious to anyone of average skill in the art that the integrated database produced by this process is the output of this process; and
3. U.S. Patent Application 09/764,068 describes a process for transforming data from disparate systems into an integrated application database and anyone of average skill in the art of data processing who read the specification would fully understand the scope of the activities associated with the transformation.

I have also attached a drawing that graphically illustrates the difference between the data integration invention described in U.S. Patent Application 09/764,068 and the Davis invention.

Finally, I will reiterate that Srivastava uses the term "metadata mapping" to describe the process of matching a summary description for a file derived from metadata for the file to a schema. 09/764,068 uses the term "metadata mapping" to describe the process of mapping from source database metadata to application database metadata. In other words, Srivastava teaches away from the meaning of metadata mapping disclosed in 09/764,068.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

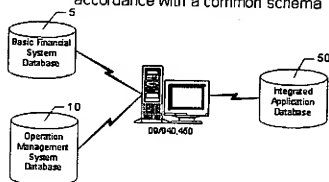
A handwritten signature in black ink, appearing to read "Greg M. Cusanza", written in a cursive style.

9.28-2009

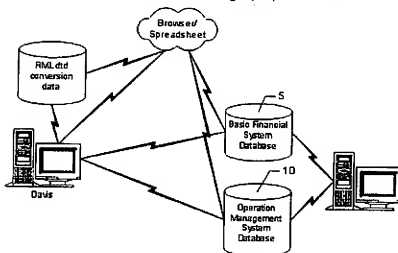
Gregory Cusanza

Date: April 28, 2009

Maps and converts source data to an integrated database in accordance with a common schema



Combines source data and conversion information in an application to produce a graph/presentation



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/743,616

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 61

Customer No: 53787

DECLARATION UNDER RULE 132

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 26 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 16 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I previously met the inventor, who is now the President of Kantrak, Inc. briefly on October 16, 2007.

On October 25, 2007, I was given a copy of U.S. Patent Application 10/743,616 entitled "A performance management platform" filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On September 29, 2008 I was given a copy of "the 1986-1988 Stock Market Investor Sentiment or Fundamentals", by Michael N. Baur, Socorro Quintero and Eric Stevens published in Managerial and Decision Economics, Vol. 17, No. 3 (May - Jun., 1996). Until that time I had not read the article or discussed it with anyone. However, I have read many articles on the subject of market value and market sentiment. I have a strong understanding of the concepts of market value and market sentiment and have been teaching these concepts for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the article by Baur et al. (hereinafter, the Baur article) has no relevance to the market sentiment calculation and analysis described in patent application 10/743,616. There are several reasons for this.

1. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm. The Baur article describes an attempt to determine if investor sentiment related to the market as a whole had an effect on changes in prices for the S&P 500 as a whole during the period from 1986-1988;
2. Patent application 10/743,616 defines market sentiment for a single firm as the difference between the market value of firm's equity and debt and the value of the firm's current operation, real options, excess financial assets and derivatives. The Baur article does not analyze the difference the market value of S&P 500's equity and debt

and the value of the S&P 500's current operation, real options, excess financial assets and derivatives as it only attempts to analyze changes in prices;

3. Patent application 10/743,616 teaches the analysis of the market sentiment level calculated for a firm using the method described in item 2 in order to identify the elements of value and/or external factors that contribute to the calculated levels. The Baur article does not teach or suggest anything about identifying the elements of value and/or external factors that contribute to market sentiment or investor sentiment;

4. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm at a specific point in time. The Baur article describes an attempt to determine if changes in investor sentiment related to the market as a whole affects weekly changes in prices for the S&P 500 as a whole over a period of several years;

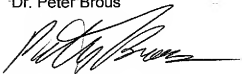
5. The Baur article cannot be used to make any inferences about investor sentiment (or market sentiment) at the firm level because increases in investor sentiment for some firms in the S&P 500 could offset decreases in investor sentiment for other firms within the S&P 500 over the time period being analyzed;

6. Patent application 10/743,616 does not teach or suggest anything about identifying a proxy for market sentiment for the market as a whole. The Baur article relies on an assumption that a measure of the change in the discount percentage on closed end funds is a proxy for investor sentiment related to the market as a whole. The Baur article also acknowledges that changes in closed end fund discounts may not be the correct proxy for measuring general investor sentiment;

7. The only conclusion that can reasonably be drawn from the Baur article is that the assumed proxy for general investor sentiment (described in item 6) did not have a significant statistical relationship to the observed price changes for the S&P 500 between 1986 and 1988.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dr. Peter Brous

A handwritten signature in black ink, appearing to read 'Peter Brous', with a long horizontal flourish extending to the right.

Date: October 17, 2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/287,586

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Yehdegga Retta

Art Unit: 3693

Docket No.: AR - 38

Customer No: 53787

DECLARATION UNDER RULE 132

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 25 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 15 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I met the inventor, the President of Kantrak, Inc. for the first time on October 16, 2007.

On October 25, 2007 I was given a copy of "How to sort out the premium drivers of post deal value", by Daniel Bielinski published in Mergers and Acquisitions in July of 1993. Until that time I had not read the article. However, I have read many articles on the subject of Value Based Management. I have a strong understanding of the concept and practice of Value Based Management and have been teaching this concept for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the Bielinski article and Value Based Management does not inherently describe or enable:

- a) the development of a computational model of the current operation segment of value by element of value where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, employee relationships, intellectual capital, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships, or
- b) the analysis of segments of value such as real options, market sentiment and/or derivatives.

There are several reasons for this:

1. As stated in the article VBM is similar to SVA. One of the ways it is similar is that it focuses on "value drivers" such as profit margin and growth instead of intangible assets as part of a tree based analysis of cash flow. Unlike SVA, VBM includes operational value drivers that drive the value drivers. However, these are generally not intangible elements of value. For example, Bielinski provides an example of breaking down profit margin by looking more closely at the cost of materials;
2. VBM is also similar to SVA in that it relies on the efficient market theory and this precludes the analysis of market sentiment;
3. SVA and VBM are tools that focus on the standard valuation model, the discounted cash flow model, that does not even consider the value associated with flexibility or decision making that is done sequentially and conditionally based on the arrival of new information. The valuation of this flexibility is the basis for valuation using real option analysis; and
4. Neither VBM or SVA address the valuation of derivatives.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,



Dr. Peter Brous

Date: July 21, 2008

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THE INTELLIGENT INVESTOR

JULY 11, 2009

Does Stock-Market Data Really Go Back 200 Years?

By JASON ZWEIG



As of June 30, U.S. stocks have underperformed long-term Treasury bonds for the past five, 10, 15, 20 and 25 years.

Still, brokers and financial planners keep reminding us, there's almost never been a 30-year period since 1802 when stocks have underperformed bonds.

These true believers rely on the gospel of "Stocks for the Long Run," the book by finance professor Jeremy Siegel of the Wharton School at the University of Pennsylvania that was first published in 1994.

Using data assembled by other scholars, Prof. Siegel extended the history of U.S. stock returns all the way back to 1802. He came to two conclusions that became articles of faith to millions of investors: Ever since Thomas Jefferson was in the White House, stocks have generated a "remarkably constant" average return of nearly 7% a year after inflation. (Adding inflation at 3% yields the commonly cited 10% annual stock return.) And, declared Prof. Siegel, "the risks of holding stocks decrease over time."

There is just one problem with tracing stock performance all the way back to 1802: It isn't really valid.

Prof. Siegel based his early numbers on data first gathered decades ago by two economists, Walter Buckingham Smith and Arthur Harrison Cole.

For the years 1802 through 1820, Profs. Smith and Cole collected prices on three dozen banking, insurance, transportation and other stocks -- but ended up including only seven, all banks, in their stock-market index. Through 1845, they tracked 19 insurance stocks, but rejected 95% of them, adding only one to their index. For 1834 onward, they added a maximum of 27 railroad stocks.

To be a good measure of stock returns, an index should be comprehensive (by including many stocks) and representative (by including the stocks commonly held by investors). The Smith and Cole indexes are neither, as the professors signaled in their 1935 book, "Fluctuations in American Business." They cherry-picked their indexes by throwing out any stock that didn't survive for the whole period, whose share prices were too hard to find or whose returns seemed "inflexible," "erratic," or "non-typical."

The database of early U.S. securities at EH.net has so far identified more than 1,000 stocks that were listed on 10 different exchanges -- including Charleston, S.C., New Orleans, and Norfolk, Va. -- between 1790 and 1860. Thus the indexes relied on by Prof. Siegel exclude 97% of all the stocks that existed in the earliest years of the U.S. market, and include only the bluest of the blue-chip survivors. Never mind all of the canals, wooden turnpikes, rubber-hat companies and the other doomed stocks that investors lost millions on -- and whose returns may

never be reconstructed.

There is a second problem with Prof. Siegel's data.

In an article published in 1992, he estimated the average annual dividend yield from 1802-1870 at 5.0%. Two years later in his book, it had grown to 6.4% -- raising the average annual return in the early years from 5.7% to 7.0% after inflation.

Why does that matter? By using the higher number for the earlier period, Prof. Siegel appears to have raised his estimate of the rate of return for the entire period by about half a percentage point annually.

Prof. Siegel calculated in his 1992 article that \$1 invested in stocks in 1802 would have grown, after inflation, to \$86,100 by 1990. In his book just two years later, however, he estimated that \$1 in 1802 would have mushroomed into \$260,000 by 1992. But in 1991 and 1992, stocks gained 30.5% and 7.6%, respectively, which should have taken the cumulative return up to only about \$121,000. Nearly all of that huge difference seems to have come from Prof. Siegel's revised number for early dividends.

"I made an estimate of the dividend yield," Prof. Siegel told me, "through looking at a smaller set of securities and projecting it out." Money manager Robert Arnott of Research Affiliates LLC has recently estimated the early dividend yield at 5.2%. "Arnott has a much lower estimate, and that's a big difference," said Prof. Siegel. "I mean, I don't know what more to say."

I later called Prof. Siegel to ask him again about the difference between his original research and his book, but he didn't get back to me by press time.

What, then, are the odds that stocks will continue to lag behind bonds for the long run? The sad truth is that history can't tell us the answer. The 1802-to-1870 stock indexes are rotten with methodological flaws. So we have only the period since then, or four distinct and complete 30-year stretches of stock returns, to base our long-term investment decisions on.

Another emperor of the late bull market, it seems, has turned out to have no clothes.

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11. Related Proceedings Appendix - None